

Childhood Imaginary Companions and Their Effect on Childhood Fantasy Play
Predisposition, and Shyness and Rejection Sensitivity in Adulthood

Sarah Rafferty

1622410

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This work is original and has not been submitted in relation to any other degree or qualification.

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Supervision Log

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30/03/2017	Discussed amendments needed for ethics form.
28/06/2017	Check in before Julie went on annual leave, discussed progress of recruitment of participants and possible directions for introduction.
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08/08/2017	Discussed feedback on introduction draft and discussed data analysis.
11/08/2017	Discussed how to lay out multiple regression table.
06/09/2017	Discussed method, results and discussion feedback.

Student Signature _____

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Abstract

The current study was conducted to investigate the effects of having an imaginary companion in childhood on fantasy play predisposition in childhood, and shyness and rejection sensitivity in adulthood. The relationships between childhood fantasy play predisposition, and adult shyness and rejection sensitivity were also investigated. These areas have seen very little previous research in an adult population, and those conducted in childhood have shown mixed results. Various studies have previously shown that children with an imaginary companion are more likely to show a predisposition toward fantasy play, though this has not been investigated recently. A sample of 64 participants were asked about recalled imaginary companions, and completed self-report measures of childhood fantasy play predisposition, and adulthood shyness and rejection sensitivity. Participants who recalled having an imaginary companion in childhood showed significantly higher scores than those who did not on the fantasy play scale, but participant groups did not differ significantly in terms of shyness or rejection sensitivity. Adult shyness and rejection sensitivity were found to have a significant predictive relationship, though childhood fantasy play did not significantly predict adult shyness nor rejection sensitivity. The results from this study suggest that childhood imaginary companions do not have an effect over time from childhood to adulthood on shyness and rejection sensitivity, but that future research is necessary to add to the knowledge base in this area. Additionally, shyness and rejection sensitivity may be changing constructs over time, but continue to share a relationship into adulthood.

Childhood Imaginary Companions and Their Effect on Childhood Fantasy Play

Predisposition, and Shyness and Rejection Sensitivity in Adulthood

Current Research Aims and Focus

Fantasy play involves treating reality in an altered form, or putting a pretend 'layer' over reality (Austin, 1979), both knowingly and meaningfully in a playful manner (Lillard, 1993). The current research aims to add to the knowledge base surrounding the effect of having a childhood imaginary companion (IC) on childhood fantasy play predisposition, to keep this research area current and up to date. Additionally, the current research aims to investigate the effect of having a childhood IC on adult shyness, an area which has seen very little past research. Furthermore, it aims to investigate the previously unstudied effect of having a childhood IC on adult rejection sensitivity. Finally, the relationships between rejection sensitivity and shyness; childhood fantasy play predisposition and shyness; and childhood fantasy play predisposition and rejection sensitivity will also be studied.

ICs and Predisposition Toward Fantasy Play

Childhood ICs are common, with 65% of children reporting that they have had, or currently have, an IC (Taylor, Carlson, Maring, Gerow & Charley, 2004). Although, there have been different definitions regarding what constitutes an IC, with some researchers using Svendsen's (1934) original definition of an entirely imagined character and some including personified objects within the definition of an IC (eg. Manosevitz, Fling & Prentice, 1977; Mauro, 1991; Meyer & Tuber, 1989; Singer & Singer, 1990). The definition of a personified object as an IC involves giving a personality to an inanimate object, such as a doll or teddy bear (Klausen & Passman, 2006). More recently, Harris (2000) has argued that impersonation, where a child takes on the identity of another (often an animal, superhero or another person), should be included in the definition of having an IC. The only early study which included impersonation as a part of the research into ICs came from Ames and Learned (1946), who used parental interviews and observations of children to determine the

existence of an IC, which included reports or observed behaviours of impersonation. More recently, impersonation has become more regularly included in studies as a definition of having an IC (eg. Carlson & Taylor, 2005; Taylor & Carlson, 1997; Taylor et al., 2004). Having said this, some studies do not include any specific definition of an IC within their research, and simply ask 'as a child, did you ever have any imaginary companions?' (Gleason, Jarudi & Cheek, 2003), 'do you have a pretend friend?' (Taylor, Cartwright & Carlson, 1993) or 'did you ever have an imaginary playmate or companion?' (Dierker, Davis & Sanders, 1995). These differences in definitions across previous studies make it difficult to compare the results found, with no clear and unified definition within this area. While it has been recognised that these differing forms of IC are connected, there are also distinctions to be made between them (Ames & Learned, 1946). For example, it has been found that the relationship between a child and their imagined character companion is similar to that between themselves and their peers, but the relationship between a child and a personified object reflects a more caregiving relationship (Gleason, 2002; Gleason, Sebanc & Hartup, 2000). However, it is worth noting that both Gleason (2002) and Gleason et al. (2000) relied on parental reports of the existence of an IC. While the researchers stated that they wished to avoid a situation in which children created the IC at the time of the interview, parental report has been shown to be a potentially inaccurate measure of the existence of children's ICs (Taylor et al., 1993; Taylor & Carlson, 1997). Additionally, many parents may not be aware that their child has an IC (Jersild, 1968). In the case of research which uses parental reports, the possibility must be noted that their reports of the existence of an IC could be inaccurate, meaning that some children may be placed into the wrong IC group. Furthermore, Gleason et al. (2000) reported that eight children in their study had both an entirely imagined character *and* a personified object IC, in which cases only the data from the entirely imagined character was used. This could have led to the data not being truly representative of the differences in relationships between children and the two types of IC. Nevertheless, the research conducted by Gleason (2002) and Gleason et al. (2000)

suggests distinctions in these two forms of IC, with each having possible different developmental effects, making this an area which warrants further investigation.

Research has shown that children who engage in play with an IC are more predisposed to engage in fantasy play (Bouldin, 2006; Taylor, 1999) and have shown a higher interest in fantasy play than their counterparts without an IC (Bouldin & Pratt, 1999; Taylor & Carlson, 1997; Taylor et al., 1993). Furthermore, it has been shown that children who have an IC are more likely to show an interest in myth and magic whilst playing, suggesting that they are more prone to fantasy type play (Bouldin & Pratt, 1999). Cognitive affective-theory suggests that children use fantasy play as a way to explore their world in a way which is non-threatening by fitting their play around existing schemas (Singer & Singer, 1990). Following on from this, a child may create an IC to support this exploration in what they deem to be a safer environment (Singer & Singer, 1990; Taylor et al., 1993). This theory supports the previously found link between ICs and fantasy play predisposition.

The engagement in fantasy play and the creation of an IC both require high levels of imagination and creativity, which have been shown to be features of children who engage in fantasy play and IC play (Hoff, 2005; Schaefer, 1969; Singer & Singer, 1990). Additionally, the imagination of adults who recall having an IC in childhood has been shown to be higher than those who did not (Gleason et al., 2003). This suggests that the skills needed for both IC and fantasy play are similar, giving further support for the link between the two.

The link between IC play and fantasy play predisposition in childhood is one which has been found across a variety of studies using different methodologies, including retrospective recall (Dierker et al., 1995), studying children alone (Bouldin, 2006), parental questionnaires (Bouldin & Pratt, 1999) and those which mix child and parental interviews (Taylor et al., 1993; Taylor & Carlson, 1997). However, as previously discussed, much of the aforementioned research differed in the definition of an IC that was used, meaning that the results may not be directly comparable. Having said this, it could be argued that this is a finding which seems to remain constant regardless of the definition of an IC that is used.

Though the previous research gives strong evidence of the link between children having an IC and showing a predisposition toward fantasy play, it is important to keep research up to date. Since no published research seems to have investigated this area over the past decade, the current research aims to add to the knowledge base and keep this research area current.

ICs and Shyness

Defining features of shyness include physical, cognitive and behavioural characteristics, for example, blushing, fearing negative evaluation from others or social withdrawal (Heiser, Turner, Beidel & Roberson-Nay, 2009). Different theories on what causes a child to be shy include those from a biological standpoint, which suggest that some children are innately predisposed to being more timid when presented with a social situation (Kagan, 1997). This has been supported by research which shows that shy children struggle to regulate their arousal levels when faced with social situations in comparison to children who are not shy (Spangler & Schieche, 1998). Additionally, it has been shown that children who are shy show higher cortisol levels when in these situations (Schmidt, Fox, Schulkin & Gold, 1999). This research suggests that shy children have higher stress levels when faced with social situations than children who are not shy. Explanations based around Attachment theory (Bowlby, 1958) suggest that shy children did not have a secure attachment with a parental figure during infancy, leading to an internal working model in which they see the world around them as scary, with the child subsequently afraid to explore his or her social surroundings (Sroufe, 1988).

In contrast however, studies using factor analysis have shown shyness to be a personality trait in childhood, adolescence and adulthood (Shiner & Caspi, 2003; Crozier, 1979). Other researchers have suggested that shyness stems from poorly developed social skills, which can lead a child to socially withdraw due to anxiety when being faced with a social situation due to fear of negative social evaluation from peers (Coplan, Prakash, O'Neil & Armer, 2004). Coplan et al. (2004) suggest that shy children have the desire to interact

socially, but avoid social situations due to these fears of negative social evaluation. This may lead to a cycle in which a child with poor social skills does not interact with peers, leading to social rejection, social withdrawal and shyness for this child. This means that a shy child may not benefit from the positive effect on social-cognitive development that having good peer relationships can bring (Rubin, Bukowski & Parker, 2006), and may consequently show a lack of or limited advancement in their social skills development. It may be in this case that a child creates an IC, as a way for them to gain successful social interactions in a situation where good social skills are not a necessity, considering that an IC is controlled entirely by the child who created them (Taylor, 1999). Nagera (1969) suggested that shy children use ICs as an aid or coping mechanism during times of stress. However, it is worth noting that Nagera observed this in a clinical population of children during psychoanalysis therapy. Nagera noted himself that, regarding ICs, 'the situation is quite different outside the psychoanalytic literature' (Nagera, 1969, p. 167).

Additionally, it has been suggested that children create ICs to compensate for having fewer social relationships (Manosevitz, Prentice & Wilson, 1973) and that this may be because of their inability to develop real friendships (Nagera, 1969). This viewpoint has been supported by research which has shown that children who have an IC were perceived by teachers as having lower social skills, a poor self-image, not being socially accepted by peers and thus having fewer friends (Harter & Chao, 1992). However, it is worth noting that Harter and Chao (1992) used parental reports to determine the existence of an IC, which as previously discussed may not always be an entirely accurate measure (Jersild, 1968; Taylor et al., 1993; Taylor & Carlson, 1997). Having said this, Harter and Chao (1992) noted that there were no discrepancies between parental reports and their children's reports of an IC, with all parental reports of an IC being acknowledged by their children within interviews. Additionally, research using a first-hand methodology of self-reports from children, showed that those who reported having an IC, compared to children without an IC, considered themselves to have fewer friends (Hoff, 2005). However, while the children in Hoff's study

who had an IC scored lower on self-image (including reporting themselves to have fewer friends) than those who did not have an IC, the sample as a whole scored much higher than the average reported in the reference data for the scale which was used. This indicates that, though the children with an IC scored lower on self-perception than the other participants within this particular sample, they were actually above average on the whole. This brings into question whether the children with an IC in this particular sample would consider themselves to have fewer friends if compared to those without an IC in another sample.

Some researchers have suggested that children who create an IC do so to buffer the feelings of loneliness caused by a lack of social interaction from peers (Caplan & Caplan, 1973; Hoff, 2005). This view has been strengthened by research demonstrating that firstborn or only children are more likely to create ICs (Bouldin & Pratt, 1999; Gleason et al., 2000; Manosevitz, et al., 1973). This suggests that children with no siblings to socially interact with are the ones more likely to feel lonely and, therefore, create an IC to buffer these feelings.

The discussed research suggests that children who have poor social skills withdraw and become shy due to anxiety surrounding negative social evaluation from peers. With these considerations, it could be argued that shy children are more likely to create an IC to gain the social interaction that they desire and/or to buffer the feelings of loneliness caused by a lack social interaction. Although, as noted previously, the methodological limitations of these studies which have been discussed must be taken into account.

In contrast to these findings, it has also been shown that children who have an IC are less shy (Mauro, 1991), have better social skills (Partington & Grant, 1984) and that adolescents and children with ICs are more sociable (Seiffge-Krenke, 1997; Singer & Singer, 1990) than their counterparts without an IC. It has been suggested that this is due to an increased chance to practice social interactions (Somers & Yawkey, 1984).

Having said this, it is important to note that the mentioned studies conducted by Mauro (1991) and Partington and Grant (1984), which found children with an IC to be less shy and show better social skills than those without, relied on parental reports of whether their children had an IC. As previously discussed, studies of this type may be a potentially inaccurate measure (Jersild, 1968; Taylor et al., 1993; Taylor & Carlson, 1997). Even within their study, Partington and Grant (1984) found discrepancies between the accounts from children regarding the existence of an IC and their parent's knowledge of this existence. Seiffge-Krenke (1997) used adolescent participants' self-reports, which may have been a more reliable measure of the existence of an IC. However, this study questioned participants about a different type of IC. Seiffge-Krenke (1997) investigated participants' diary entries, and whether diary entries were addressed to a particular person (an imagined entity). If participants indicated that they did address their entries to a particular person, there were categorised as having an IC. Because of this, this study may not be directly comparable to those which investigated the more frequently studied forms of ICs (eg. an entirely imagined character, a personified object or impersonation).

Research has shown that children with an IC are aware that their IC is not real, and that they are more likely to interact with their peers when given the option (Hoff, 2005; Manosevitz et al., 1973). Therefore, it could be argued that ICs are engaged with due to a desire to socialise when the option of socialising with real-peers is not available. Furthermore, it has been found that children with and without ICs do not differ in the amount of friends that they have, or in regards to peer acceptance (Gleason et al., 2000; Gleason, 2004). This would suggest that having an IC does not impact children's social skills and that children with an IC do not withdraw socially and are not likely to be shy. However, it is worth noting again that both Gleason et al. (2000) and Gleason (2004) relied on parental reports of whether their children had an IC, which as previously discussed may not be an entirely accurate report. Further to this, Gleason et al. (2000) found that mothers of children with an entirely imagined character IC attributed the creation of the IC to loneliness and the

desire for a play mate. This being said, this was not found to be the case within the study, with children with an IC (both entirely imagined characters and personified objects) and children without an IC not differing in terms of the amount of friends that they had.

Adding further complexity to the picture, Gleason et al. (2000) found that children with and without an IC did not differ in their attitudes toward attending preschool. This suggests that those with an IC were not anxious when faced with a social situation, and therefore did not differ in terms of social withdrawal or shyness. Additionally, previous findings have shown that children who have an IC are less anxious than those without an IC (Singer & Singer, 1990). This, again, suggests that children who have an IC are not anxious in social situations, and therefore do not withdraw or act shy around peers. Though, again, it must be noted that the findings from Gleason et al. (2000) relied on parental reports of how much their child enjoys preschool (on a 4-point scale from 'enjoys' to 'does not like at all'). This may not take into account any unseen behaviours, such as anxiety or social withdrawal, whilst children were in attendance at preschool.

The discussed research is complex and contradictory in findings regarding the social skills, social withdrawal and shyness of children who have an IC. Furthermore, it has also been found that older children have higher rates of ICs than is reported (Hoff, 2005), as do adolescents as old as 17 years (Seiffge-Krenke, 1993, 1997), but keep them to themselves as they grow out of young childhood (Singer & Singer, 1990). Furthermore, it has been shown that shyness can develop after the age of 10 (Buss, 1986). This suggests that studies conducted in young childhood may not have taken into account those who are yet to create an IC, or yet to exhibit the signs of shyness. It is unclear what effect ICs and shyness emerging at later ages may have during the later stages of childhood, adolescence and emerging adulthood. Having said this, it is important once again to consider the type of IC used within the studies conducted by Seiffge-Krenke (1993, 1997). In both, ICs were measured depending on whether participants directed their diary entries to a particular person. Since the finding from these studies suggested that ICs can be created up to the

age of 17, the form of IC used within the study seems particularly important to consider.

Because of this, it cannot be said with any certainty that the more frequently studied forms of IC (entirely imagined character, personified object or impersonation) are created up until this age.

These contrasting results leave uncertainty surrounding whether having an IC in childhood leads to adults who have poor social skills and are shy, an area which has been understudied. The only methodology which seems to have been used to investigate the differences between adults who had an IC in childhood, and those who did not, is retrospective research. For example, Gleason et al. (2003) used a very similar retrospective design to the current study, and found no differences in shyness between adults who recalled having an IC and those who did not. Similarly, Kidd, Rogers and Rogers (2010) used a retrospective design to investigate differences between adults who did and did not recall having an IC in childhood, though this study was investigating differences in personality that did not include shyness (eg. creativity and imagination). However, both of the aforementioned studies contained differences in their methodology to the current study design. For example, Gleason et al. (2003) used a population of all females, and while this may be justifiable as it has been widely shown that females are the most likely to have an IC (Ames & Learned, 1946; Carlson & Taylor, 2005; Dierker et al., 1995; Hoff, 2005; Hurlock & Burstein, 1932; Jersild, Markey & Jersild, 1933; Manosevitz et al., 1977; Mauro, 1991; Pearson et al., 2001; Svendsen, 1934; Taylor & Carlson, 1997), the current study does not aim to study an all-female population. Therefore, the current study may be able to find gender differences regarding ICs and shyness that Gleason et al. (2003) did not. Furthermore, neither Gleason et al. (2003) nor Kidd et al. (2010) used a definition of an IC within their studies, with both simply asking participants whether they had an IC as a child. The current study will include personified objects and entirely imagined characters as definitions for participants, hopefully to ensure that all participants are aware of what an IC is, and are consequently categorised into the correct groups.

While retrospective designs may have issues regarding accurate recall from participants, this methodology has been shown to be highly accurate in terms of recall (Baumgarten, Siemiatycki & Gibbs, 1983; Stewart, Tonascia & Matanoski, 1987). Based on this, and the designs of the previous studies mentioned, a retrospective design seems to be a valid way to continue research into this area.

However, even with this in mind, of the few studies in this area, there are similarly contrasting results. Some research results show that those who did have an IC in childhood are less shy and show higher levels of sociability in adulthood (Singer & Singer, 1990), while some have shown no difference in adult shyness levels (Gleason et al., 2003). Additionally, it has been suggested that children who show shyness and anxiety in childhood may not show these traits socially in adulthood (Degnan & Fox, 2007). Degnan and Fox (2007) suggested that shyness in childhood will not be shown in adulthood if shy children learn to control their tendency to focus on perceived threat in social situations. Higher levels of perceived threat have been shown to be a characteristic of shy children, more so than children who are not shy (Derryberry & Reed, 1994).

Contrastingly, it has been suggested that shyness in childhood can lead to peers viewing a person as unsociable in adulthood, possibly leading to continued social rejection and less social relationships (Rubin & Asendorpf, 1993). If the viewpoint is taken that children with poor social skills create ICs, this research suggests that these children may grow into adults with poor social skills who do not have good peer relationships, and who are shy and withdrawn. However, the outcomes for children with ICs into adulthood are unclear and seemingly warrant further research into the area, which is what the current research aims to do by building upon the previously mentioned retrospective research.

ICs and Rejection Sensitivity

The area surrounding social skills, social rejection and ICs may be linked to rejection sensitivity. As previously discussed, a child with poor social skills may shy away from social

situations as they fear negative social evaluation from peers (Coplan et al., 2004). If a child continually seems uninterested in social interaction, this can lead to social rejection as peers may view this behaviour as maladaptive (Younger, Gentile & Burgess, 1993). This social rejection has been shown to lead to further problems in developing and applying social skills such as initiating social interactions, understanding social cues and social rules surrounding play, thereby leading to problems during play with peers (Dodge & Feldman, 1990; Jones, Abbey & Cumberland, 1998; Nelson & Crick, 1999; Nesdale & Lambert, 2007, 2008; Rubin et al., 2006). This social rejection may lead to a child socially withdrawing and avoiding social contact (Molden, Lucas, Gardner, Dean & Knowles, 2009). As previously discussed, this may lead to a child compensating for this lack of social interaction, and the feelings of loneliness it causes, by creating an IC (Caplan & Caplan, 1973; Hoff, 2005; Manosevitz et al., 1973). However, if this social rejection is continued, this may lead to a rejection sensitivity, in which a child may avoid any social situation which carries a high risk of rejection (Bourgeois & Leary, 2001; MacDonald & Leary, 2005). It could be argued that a child may create an IC to give themselves the opportunity to socially interact in a situation where rejection is not a possibility, which may cause further social withdrawal, leading into a repeating cycle. Bouldin and Pratt (2002) found that children who have an IC show anxiety toward being able to/known how to meet the expectations of others. It may be inferred from this that a child with an IC is more likely to experience rejection sensitivity, as they worry about meeting the expectations of peers and the rejection that not doing so may bring. Though they did use parental reports, Bouldin and Pratt (2002) controlled for this by ensuring that only those reports which were consistent with the child's reports of an IC were included in the IC group. Additionally, it has also been found that adolescents who report having had an IC in childhood show high anxiety levels regarding social situations (Bonne, Canettie, Bachar, De-Nour & Shalev, 1999). This may indicate rejection sensitivity in those adolescents who had an IC in childhood, as their anxiety may be caused by a fear of negative social evaluation and rejection.

However, there is contrasting research which has suggested that children with an IC are no more likely, or less likely, to be rejected by peers. For example, research has found that children with an IC have real friends at an equal level to those without an IC (Gleason et al., 2000; Manosevitz et al., 1973; Masih, 1978). In this case, these children are unlikely to show rejection sensitivity, as they have not experienced continued social rejection.

Furthermore, research which suggests that children with an IC have better social skills than those who do not (Partington & Grant, 1984) indicates that these children will successfully make and maintain friendships, as children with good social skills are highly accepted by peers (Connolly & Doyle, 1981; Howes, 1988). With these contrasting research results considered, the effect of having a childhood IC on rejection sensitivity seems to require further investigation, especially if the negative outcomes linked to rejection sensitivity are to be considered. These include negative outcomes such as poor self-regulation, aggression, depression, controlling behaviours and poor romantic relationships (Ayduk, Downey & Kim, 2001; Downey & Feldman, 1996; Leary & Baumeister, 2000).

The effects of rejection sensitivity into adulthood, concerning those with ICs, has seen very little investigation. A study conducted by Gleason et al. (2003) used retrospective studies of adults to investigate the personality differences between those who recalled having an IC in childhood and those who did not. The results showed that adults who recalled having an IC in childhood were more likely to engage in behaviours oriented toward pleasing others, regardless of their own wishes. This was shown in positive responses to questions such as 'I often put others' needs before my own' and negative responses to questions such as 'I tell my friends openly when I disagree with them'. The researchers suggested from their study results that participants 'appear to place a high value on harmony with others, even if it means going against their own desires' (Gleason et al., 2003, p. 733). The results from this study suggest that the participants who recalled having an IC in childhood were likely to go against what they wanted to do in a social situation to avoid any rejection from their peers. This suggests that they had a higher sensitivity to rejection than

those who did not recall having an IC. However, as previously mentioned, Gleason et al. (2003) used a population of all females, which the current study does not aim to do. The gender differences in regards to rejection sensitivity may be particularly interesting, considering that previous research has indicated a possible difference between males and females in this area. For example, females have been shown to exhibit higher stress levels when faced with social rejection scenarios than males (Stroud, Salovey & Epel, 2002), suggesting that they are more sensitive to social rejection, and may show higher levels of rejection sensitivity than males.

Additionally, it is important to note that Gleason et al. (2003) were not directly measuring rejection sensitivity, and as such did not use a rejection sensitivity measure. Because of this, while connections can be drawn between their findings and rejection sensitivity, no research to current knowledge has directly investigated the effects of having an IC in childhood on rejection sensitivity in adulthood. The current research aims to add to this knowledge base.

The Relationships Between Fantasy Play Predisposition in Childhood and Rejection Sensitivity and Shyness in Adulthood

There is seemingly a link between shyness and rejection sensitivity. The previously discussed research suggests that a shy person is one who is likely to become sensitive to rejection, due to shyness and withdrawal from social interaction being seen as maladaptive, and consequently being continually socially rejected by peers because of this (Younger et al., 1993). However, Younger et al. (1993) used children as participants in their research, whereas the current study will be investigating adult's shyness and rejection sensitivity. This is an area which has previously, to current knowledge, not been investigated.

Additional previous studies can also be somewhat comparable to the current research aims. For example, rejection sensitivity has been found to be a predictor of social withdrawal (London, Downey, Bonica & Paltin, 2007; Watson & Nesdale, 2012).

Considering that social withdrawal has been suggested as a feature of shyness (Coplan et al., 2004; Heiser et al., 2009), comparisons can be drawn between these and the current study. However, it is important to note that London et al. (2007) used a population of participants who were largely from a disadvantaged, minority background. This is a population which may often face rejection from others (Quintana & McKown, 2008), and so the participants within this study may have been more prone to rejection sensitivity than a wider population. Watson and Nesdale (2012) used a very similar methodology and measure of rejection sensitivity as the current study aims to use, which consisted of adults being tested using the Rejection sensitivity questionnaire (Downey & Feldman, 1996). The current study will use the adult version of this questionnaire (Berenson et al., 2009), which is arguably a better fit for adult participants. Furthermore, the current study does not aim to investigate social withdrawal specifically, and so can hopefully build on this previous research in terms of the relationship between rejection sensitivity and shyness as a whole.

The relationship between fantasy play in childhood and shyness in adulthood is also an area which has seen little previous research, however, connections can be drawn. For example, childhood engagement in fantasy play has been suggested as an aid for many areas of children's development (Astington & Jenkins, 1995; Bates, Benigni, Bretherton, Camaioni & Volterra, 1979; Lewis & Ramsay, 2004; McCune, 1995; Nielsen & Dissanayake, 2000; Taylor & Carlson, 1997). This includes a suggested aid in the development of a child's theory of mind, which has been linked to children's ability to interact and socialise with peers (Astington & Jenkins, 1995; Connolly & Doyle, 1984) by understanding their needs, intentions and perspectives (Slomkowski & Dunn, 1996). Further to this, the engagement in fantasy play has also been suggested to aid in social-cognitive development (Flavell, Green & Flavell, 1990; Singer, 1973; Vygotsky, 1978), with research showing that the engagement in fantasy play positively predicted popularity and social skills (Connolly & Doyle, 1984). This link between the engagement in fantasy play and well developed social skills has also been found by Garvey (1977) and Rubin and Maioni (1975), as well as fantasy play being

suggested as an important contributor to children's social skill development (Coppie & Bredekamp, 2009; Hurwitz, 2002). Having said this, since fantasy play involves skills such as communication and cooperation (Bretherton, 1989; Rubin & Pepler, 1980), it could be that children with better developed social skills are the ones more likely to engage in fantasy play to begin with. Nevertheless, it would seem that the engagement in fantasy play in childhood is linked to well-developed social skills. This relates to the current research as links can be made between the social skills of children and shyness. As previously discussed, social withdrawal is a defining feature of shyness (Heiser et al., 2009), and children with poor social skills may socially withdraw due to anxiety and fear of negative evaluation from peers (Coplan et al., 2004). Therefore, it could be argued that poor social skills are linked to shyness. Since the discussed research suggests that the engagement in fantasy play aids in the development of good social skills (Connolly & Doyle, 1984; Garvey, 1977; Rubin & Maioni, 1975), this suggests that children who engage in fantasy play are less likely to be shy than those who do not. The current study aims to investigate the relationship between fantasy play predisposition in childhood and shyness in adulthood. Since it has been suggested that shyness in childhood may not be carried through to adulthood (Degnan & Fox, 2007), the relationship between the two is unclear, with the current research aiming to investigate this further.

The relationship between fantasy play in childhood and rejection sensitivity in adulthood is again one which, to current knowledge, has not been previously studied. Though if the previously discussed link between the engagement in fantasy play and social skills and social withdrawal are to be considered, links can be drawn. It could be argued that children who engage in fantasy play are less likely to withdraw socially due to the well-developed social skills that this may bring. Therefore, they are unlikely to experience the continued social rejection which is thought to cause rejection sensitivity (Bourgeois & Leary, 2001; MacDonald & Leary, 2005). However, again, the current research aims to study the

relationship between fantasy play predisposition in childhood and rejection sensitivity in adulthood, which is currently unclear due to a lack of previous research into this area.

Current Study Aims

Due to the lack of research in an adult population, and the contrasting results of research when undertaken in childhood, it would seem that the outcomes for adults who had an IC in childhood require further investigation. In particular, this research study aims to investigate the effect of having an IC in childhood on fantasy play predisposition in childhood, and on shyness and rejection sensitivity in adulthood. Further to this, the relationships between childhood fantasy play predisposition and shyness and rejection sensitivity in adulthood will be investigated.

The current study will use the Imaginary companion play during childhood questionnaire (Kirkham, 2013a) to determine the existence of an IC in childhood, and the Predisposition towards fantasy play scale (Kirkham, 2013b) to measure childhood fantasy play predisposition. The Adult rejection sensitivity questionnaire (Berenson et al., 2009) will be used to measure rejection sensitivity, and has previously shown good internal reliability in adult populations (eg. Berenson, Downey, Rafaeli, Coifman & Paquin, 2011; Hurley, Field & Bendell-Estoff, 2012; Pearson, Watkins & Mullan, 2010). Finally, the Revised Cheek and Buss shyness scale (Cheek & Briggs, 1990) will be used to measure shyness as this has been the most generally used measure of shyness in previous research (Heiser, Turner & Beidel, 2003; Leary, 1991), and has shown good internal reliability in previous studies (eg. Bradshaw, 1998; Crozier, 2005).

Hypotheses

H1 Due to previous research findings suggesting that children who had an IC were predisposed to engage in fantasy play, and showed a higher level of interest in fantasy play than those without an IC (Bouldin, 2006; Bouldin & Pratt, 1999; Taylor, 1999; Taylor & Carlson, 1997; Taylor et al., 1993), the current research predicts that participants who recall

having an IC in childhood will score significantly higher on the fantasy play scale (Kirkham, 2013b).

H2 Previous research has shown contrasting results in regards to the link between having an IC in childhood and levels of shyness. The current research predicts that there will be a difference in shyness scores between those who did and did not have an IC as a child.

H3 Past research has shown that children who have an IC are more anxious when faced with social situations (Bonne et al., 1999), experience higher anxiety surrounding meeting the expectations of others (Bouldin & Pratt, 2002), and that adults who had an IC are more inclined to please others (Gleason et al., 2003). Because of this, the current study expects to find that participants who recall having an IC in childhood are more likely to be sensitive to rejection, and score significantly higher on the rejection sensitivity scale than those who do not recall having an IC in childhood.

H4 Previous research suggests that children who are anxious about social interactions withdraw from social situations (Coplan et al., 2004), which may be interpreted as maladaptive by peers (Younger et al., 1993) and lead to social rejection. Continued social rejection may lead to rejection sensitivity (Bourgeois & Leary, 2001; MacDonald & Leary, 2005) and further social withdrawal and shyness. However, some research into adults suggests that shyness and rejection sensitivity are not linked (Gleason et al., 2003). Based upon these mixed findings, the current study predicts a relationship between rejection sensitivity and shyness.

H5 Previous research has found that children who engage in fantasy play have better social skills (Connolly & Doyle, 1984; Garvey, 1977; Rubin & Maioni, 1975), and thus would not be expected to be rejected socially and experience rejection sensitivity. For this reason, the current study predicts a negative correlation between fantasy play predisposition in childhood and rejection sensitivity in adulthood.

H6 The link between the engagement in fantasy play and good social skills is also likely to share a relationship with shyness in adulthood. Since it has been found that low social skills are a contributing factor to shyness (Coplan et al., 2004), an adult who engaged in fantasy play in childhood is likely to have developed good social skills and therefore be less shy. For this reason, the current study predicts a negative correlation between fantasy play predisposition in childhood and shyness in adulthood.

Method

Participants

A total of 64 participants completed the study, and were recruited using convenience sampling in which they were invited to participate through Facebook messenger or through the University of Chester research participation site (see appendices A and B for the participation advertisements used). This was done to ensure that all participants who had access to the study link on Bristol online survey were above the age of 18 and were therefore eligible to give consent on their own behalf. The sample was predominantly white females, with 41 females, 21 males and 2 participants who answered that they would prefer not to say what gender they identified with. The participants ranged in age from 18 - 62, with a mean age of 27. All participants who completed the online study were presented with an online information sheet before beginning the study and a debrief sheet upon completion (see appendices C and D). Ethical approval was given by the University of Chester Psychology Department Ethics Committee (see appendix E). Participants were treated in accordance with the ethical guidelines of the British Psychological Society (BPS, 2014).

Measures

The study used a questionnaire containing demographic questions and questions around recalled ICs, along with scales to collect data on participants' predisposition to fantasy play, levels of shyness and levels of rejection sensitivity (see appendices F, G, H

and I). Cronbach's alpha levels, eigenvalues, scree plots, percentage of variance and factor loadings will be discussed in relation to each scale (see appendix J for each).

The questionnaire regarding demographics and recalled ICs was the Imaginary companion play during childhood questionnaire (Kirkham, 2013a). The scale used to measure predisposition to fantasy play was the Predisposition towards fantasy play scale (Kirkham, 2013b). The demographic questionnaire involved questions such as 'age' and 'gender', and the imaginary companion questionnaire asked participants about their IC, including questions such as what type of IC they had (personified object or entirely imagined friend), the vividness of their IC on a scale from one to five and recalled details about their ICs. All response options included a 'prefer not to say' option, or could be left blank.

The fantasy play scale contained 11 items, each with a 5-point Likert scale ranging from strongly disagree to strongly agree, with a 'prefer not to say' option included as an alternative. This included items such as 'I often treated my toys as if they were real' and 'I found fantasy play boring as a child'. Firstly, the responses to items 3, 6, 8 and 10 were reverse scored, following which participants' scores for each item were totalled, with a minimum possible score of 11 and a maximum possible score of 55 (assuming no missing answers). The fantasy play scale, when tested with this study's population, showed a mean of 41.16 ($SD = 8.47$), with a range of 21.00 – 55.00, and a Cronbach's alpha of .85. This indicates that it is a reliable measure of fantasy play predisposition as the alpha level is above .70, which is generally accepted as the minimum level for a reliable scale (DeVellis, 2016; George & Mallery, 2003; McMillan & Schumacher, 2001; Nunnally, 1967; Pallant, 2013). The Cronbach's alpha found by Kirkham (2013b) was similar, at .91. To test the validity of the scale, a Scree plot was created using principal component analysis. This suggested one main component which explained 42.99% of the total variance. Additionally, all items loaded onto this component, with factor loadings no lower than .32, and all above the recommended levels of .30 (Floyd & Widaman, 1995). The above indicates that the scale is a valid and reliable measure when used with this population.

The scale used to measure participants' shyness levels was the Revised Cheek and Buss shyness scale (Cheek & Briggs, 1990), which has been the most generally used measure of shyness in previous research (Heiser et al., 2003; Leary, 1991). This scale contained 14 items, each with a 5-point Likert scale ranging from very uncharacteristic to very characteristic, with a 'prefer not to say' option included as an alternative. Examples of items from this scale include 'I feel tense when I'm with people I don't know well' and 'I do not find it hard to talk to strangers'. Firstly, the responses to items 3, 6, 9, and 12 were reverse scored, following which participants' scores for each item were totalled, with a minimum possible score of 14 and a maximum possible score of 70 (assuming no missing answers). The psychometric properties of the scale were tested using this study's population, and showed a mean of 36.06 ($SD = 10.66$), with a range of 14.00 – 69.00 and a Cronbach's alpha of .88, which was again above the generally accepted level of .70 (DeVellis, 2016; George & Mallery, 2003; McMillan & Schumacher, 2001; Nunnally, 1967; Pallant, 2013). When tested with the current population, a Scree plot suggested one main component, which explained 40.22% of the total variance. Further factor analysis showed that all items loaded onto this component with factor loadings no lower than .37. The above indicates that this is a valid and reliable measure of shyness when used with this population. Previous studies have found similar reliability results when using the 14-item version of the Revised Cheek and Buss shyness scale (Cheek & Briggs, 1990), with alpha levels ranging from .84 to .86 (Bradshaw, 1998; Crozier, 2005).

The final scale used was the Adult rejection sensitivity questionnaire (Berenson et al., 2009). This scale contained nine items giving situations such as 'You ask your parents or another family member for a loan to help you through a difficult financial time', with two sub-items per situation which measured rejection concern and acceptance expectancy (totalling 18 participant responses). The rejection concern sub-item matching the situation given above was 'How concerned or anxious would you be over whether or not your family would want to help you?', with a 6-point Likert scale for responses ranging from very unconcerned

to very concerned. The acceptance expectancy sub-item matching the situation given above was 'I would expect that they would agree to help me as much as they can', with a 6-point Likert scale for responses ranging from very unlikely to very likely. Each sub-item also contained a 'prefer not to say' option as an alternative. Acceptance expectancy scores were subtracted from seven to give a rejection expectancy score (rejection expectancy = 7 – acceptance expectancy). A rejection sensitivity score was then calculated by multiplying the rejection concern score and the rejection expectancy score. Finally, a total rejection sensitivity score was calculated by dividing the rejection sensitivity score by the number of items (nine). The minimum possible score for the rejection sensitivity scale is 1 and the maximum score is 36 (assuming no missing answers). The psychometric properties for the scale using this study's population were tested, and showed a mean of 8.44 ($SD = 4.55$), with a range of 1.33 - 23.67 and a Cronbach's alpha of .84. A scree plot was generated using principal components analysis. This suggested one main component which explained 46.72% of the total variance. Further factor analysis showed that all items loaded onto this component with factor loadings no lower than .43. The above indicates that this is a valid and reliable measure of rejection sensitivity when used with this population. Previous studies have found similar results when testing the reliability of this scale, with Cronbach's alpha levels ranging from .80 to .89 (Berenson et al., 2011; Hurley et al., 2012; Pearson et al., 2010).

Procedure

Once participants arrived at the Bristol online survey website they were first presented with the online study information sheet. This informed of the study details, ethical considerations such as anonymity, useful contact details available if they were to experience any distress, contact information for researchers, information informing them that the questionnaires used were not clinical or diagnostic measures, that shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives and information regarding consent. Participants were not asked to sign a consent form as

consent was assumed at the point of data submission. Participants first completed demographic questions, followed by the Imaginary companion play during childhood questionnaire (Kirkham, 2013a), which began with a note advising them that they could skip the imaginary companion questionnaire if they did not recall having an IC in childhood. The next web page that participants completed contained the Predisposition towards fantasy play scale (Kirkham, 2013b). Participants then completed the Revised Cheek and Buss shyness scale (Cheek & Briggs, 1990) and the Adult rejection sensitivity questionnaire (Berenson et al., 2009), with each beginning on a new page. Once all of the items within the study had been completed, the last web page showed a debrief sheet thanking them for their participation, reiterating the aims of the study and re-giving useful contact information in case of distress.

Design and Analysis

A cross-sectional, self-report survey design was used for this study with the independent variable being whether participants recalled having an IC in childhood and the dependant variables being predisposition to fantasy play, shyness and rejection sensitivity. Due to the scale nature of the surveys, the data collected was ordinal and therefore non-parametric, and as such was analysed using Mann Whitney U tests to determine the effect of having an IC in childhood on the dependant variables. A Mann Whitney U test was also used to investigate the effect of gender on each of the dependant variables.

The relationships between the scale variables was also investigated, and again the data was non-parametric due to the measures used. As such, a series of Spearman's rank correlations were conducted to assess the relationships between the variables, followed by linear multiple regression analysis if required.

Results

The current study aimed to investigate whether having an IC in childhood has an effect on adult's levels of shyness and rejection sensitivity. Additionally, the effect of having

an IC on predisposition toward fantasy play in childhood was also investigated. Finally, the relationships between predisposition toward childhood fantasy play, and adult rejection sensitivity and shyness were explored (see appendix J for SPSS output).

Gender Differences

The data was firstly screened to check for gender differences. Table 1 shows the amount of male and female participants who completed the study.

Table 1. *Table to show the amount of male and female participants who completed the study.*

Gender	Frequency
Male	21
Female	41
Prefer not to say	2
Total	64

A Mann Whitney U test, 2-tailed, was used to check for gender differences. Table 2 shows the mean rank and standard error for males and females on each variable, with the two participants who answered 'prefer not to say' regarding their gender omitted as their gender was unknown.

Table 2. *Mean rank and standard error for male and female participants on the fantasy play, shyness and rejection sensitivity scales.*

Variable	Gender	Mean rank	Number of participants	Standard error
Fantasy play	Male	24.76	21	67.10
	Female	34.95	41	
Shyness	Male	35.43	21	67.13
	Female	29.49	41	
Rejection sensitivity	Male	37.07	21	67.22
	Female	28.65	41	

The results showed that gender had a significant effect on predisposition to fantasy play, with females scoring more highly, ($U = 289.00$, $z = -2.11$, $p = .04$, $r = -.27$). Gender did not show a significant effect on shyness, ($U = 513.00$, $z = 1.23$, $p = .22$, $r = .16$), or on rejection sensitivity, ($U = 547.50$, $z = 1.74$, $p = .08$, $r = .22$).

Effects of Having an IC in Childhood

Table 3 shows the number of participants who reported having had an IC in childhood, the type of IC that they reported having and examples of descriptions given from participants regarding their IC. Two participants answered that they did not recall having an IC in childhood, but also answered that they had a personified object IC. However, there was no subsequent information given regarding their IC. Their answers regarding the type of IC have been omitted from table 2 as these responses may have been incorrect or unreliable due to the question perhaps being misunderstood.

Table 3. *Information regarding IC type and examples of each*

Type of IC recalled	Number of participants	Examples from participants regarding IC details
Personified object	20	<p>'I had a baby doll that I used to think was real and had real feelings.'</p> <p>'A teddy bear named Kris. He had a graduation cap and glasses on, which I believed made him smart, so I conducted role play with him and my other teddies where he was the teacher.'</p>
Entirely imagined companion	14	<p>'A big white angel with wings.'</p> <p>'I would always ask my friend their opinion on choices I had to make. My pretend friend would always give me the answer I wanted to hear.'</p>
No recalled IC	30	

The effect of having an IC on the predisposition toward childhood fantasy play, and shyness and rejection sensitivity levels in adulthood were investigated. Since the data was ordinal, and therefore non-parametric, an independent samples Mann Whitney U test, 2-tailed, was used to analyse the data relating to adult shyness. Again, since the data was ordinal and therefore non-parametric, independent samples Mann Whitney U tests, 1-tailed, were used to analyse the data relating to childhood fantasy play and adult rejection sensitivity. Table 4 shows the mean rank and standard error for participants with and without an IC on each variable.

Table 4. *Mean rank and standard error for participants with and without recalled ICs on fantasy play, shyness and rejection sensitivity scales.*

Variable	Recalled IC	Mean rank	Number of participants	Standard error
Fantasy play	Yes	36.49	34	74.19
	No	27.98	30	
Shyness	Yes	31.54	34	74.23
	No	33.58	30	
Rejection sensitivity	Yes	31.69	34	74.32
	No	33.42	30	

H1 – It was predicted that participants who reported having had an IC would score higher on the fantasy play scale. The results showed that having an IC in childhood had a significant effect on predisposition to fantasy play, with participants who reported having an IC in childhood scoring significantly higher on the fantasy play scale, ($U = 374.50$, $z = -1.83$, $p = .03$, $r = -.23$).

H2 – It was predicted there would be a difference in the shyness scores between participants who did have an IC in childhood and those who did not. The results showed that participants who reported having had an IC in childhood did not differ significantly in their shyness scores compared to those who did not, ($U = 542.50$, $z = .44$, $p = .66$, $r = .06$).

H3 – It was predicted that participants who recalled having an IC in childhood would be more sensitive to rejection, and therefore show higher scores on the rejection sensitivity scale than those who did not have an IC in childhood. The results showed that participants who recalled having an IC in childhood did not differ significantly in sensitivity to rejection compared to those who did not, ($U = 537.50$, $z = .37$, $p = .36$, $r = .05$).

Relationships Between Fantasy Play Predisposition, Shyness and Rejection

Sensitivity

The relationships between the three variables was investigated using a series of Spearman's rank correlations. Table 5 shows the range of scores, the mean and the standard deviation for each variable.

Table 5. *Range of scores, means and standard deviation for each variable.*

Variable	Number of participants	Minimum	Maximum	Mean	Standard Deviation
Fantasy play	64	21.00	55.00	41.16	8.47
Shyness	64	14.00	69.00	36.06	10.66
Rejection sensitivity	64	1.33	23.67	8.44	4.55

Similar ranges of scores and similar means have been found in previous studies using the same measures of shyness and rejection sensitivity. This suggests that the population within the current study performed similarly to populations used within different studies. Table 6 outlines the measure used and the ranges and means found by previous research.

Table 6. *Range of scores, means and standard deviation for previous research studies.*

Previous research study	Measure	Minimum	Maximum	Mean	Standard Deviation
Crozier (2005)	Shyness	14.00	70.00	35.84	8.99
Berenson et al. (2009)	Rejection sensitivity	1.00	24.22	8.61	3.61
Hurley et al. (2012)	Rejection sensitivity	1.11	22.55	8.38	4.94

Table 7 shows the correlation matrix outlining the relationships between fantasy play, shyness and rejection sensitivity. A series of Spearman's rank correlations were conducted, since the data was ordinal, and therefore non-parametric.

Table 7. *Summary of inter-correlations between fantasy play, shyness and rejection sensitivity*

Variable	Fantasy play	Shyness	Rejection sensitivity
Fantasy play	-	-.27*	-.28*
Shyness	-.27*	-	.60*
Rejection sensitivity	-.28*	.60*	-

* $p < .05$

The results from the Spearman's rank correlations showed a large significant positive relationship between shyness and rejection sensitivity, $r(64) = .60$, $p = <.001$, 2-tailed, and medium significant negative correlations between fantasy play and rejection sensitivity, $r(64) = -.28$, $p = .01$, 1-tailed, and fantasy play and shyness, $r(64) = -.27$, $p = .02$, 1-tailed.

To further investigate these relationships, two linear multiple regression analyses were run, with shyness and rejection sensitivity used as the dependent variables. Fantasy play predisposition was not used as a dependant variable due to it being a retrospective measure, and therefore being unable to be predicted in adulthood. Table 8 shows the results of the linear multiple regression with rejection sensitivity used as the dependent variable, after four identified outliers were removed. Outliers were identified as being more than three standard deviations away from the mean.

Table 8. *Summary of linear multiple regression: Fantasy play and shyness as predictors of rejection sensitivity.*

Variables	Beta	T	Sig t	R sq	Adj R sq
Fantasy play	-.15	-1.56	.13		
Shyness	.66	6.89	<.001	.51	.49
Anova: F (2, 59) = 29.20, p = <.001					

The results showed that shyness was the only significant predictor of rejection sensitivity, explaining 49% of the variance.

Table 9 shows the results of the linear multiple regression with shyness used as the dependent variable, after three identified outliers were removed. Again, outliers were identified as being more than three standard deviations away from the mean.

Table 9. *Summary of linear multiple regression: Fantasy play and rejection sensitivity as predictors of shyness.*

Variables	Beta	T	Sig t	R sq	Adj R sq
Fantasy play	-.15	-1.56	.12		
Rejection sensitivity	.68	7.27	<.001	.51	.50
Anova: F (2, 60) = 30.44, p = <.001					

The results showed that rejection sensitivity was the only significant predictor of shyness, explaining 50% of the variance.

H4 – It was predicted that there would be a relationship between rejection sensitivity and shyness. The results from the initial Spearman's rank correlation showed a significant positive correlation between the two, with further investigation using linear multiple regression showing that the two are significant predictors of each other.

H5 – It was expected that a negative correlation between fantasy play predisposition in childhood and rejection sensitivity in adulthood would be found. The results from the initial

Spearman's rank correlation showed a significant negative correlation between the two, however, fantasy play was not shown to be a significant predictor of rejection sensitivity when analysed using linear multiple regression.

H6 – It was expected that a negative correlation between childhood fantasy play predisposition and shyness in adulthood would be found. The results from the initial Spearman's rank correlation showed a significant negative correlation between the two, however, fantasy play was not shown to be a significant predictor of shyness when analysed using linear multiple regression.

Discussion

The current study aimed to investigate the effect of having an IC in childhood on childhood predisposition to fantasy play, and adult shyness and rejection sensitivity. The relationships between fantasy play, shyness and rejection sensitivity were also investigated. Each research hypothesis will be discussed in turn below.

H1 - ICs and Childhood Predisposition Toward Fantasy Play

It was predicted that adults who recalled having an IC in childhood would show a higher predisposition toward fantasy play than those without an IC. The results from this study support this hypothesis, in that those who recalled having an IC in childhood were significantly more likely to show a higher predisposition toward fantasy play. This finding supports findings of previous research which have also shown that children who engage in play with an IC are predisposed to engaging in fantasy play (Bouldin, 2006; Taylor, 1999) and show a higher interest in this type of play than their counterparts who do not have an IC (Taylor & Carlson, 1997; Taylor et al., 1993). Additionally, it has been shown that children who have ICs are more likely to show an interest in myth and magic whilst playing, suggesting that they are more prone to fantasy type play (Bouldin & Pratt, 1999).

Cognitive affective-theory suggests that children use fantasy play as a non-threatening way to explore their world by fitting their play around existing schemas (Singer &

Singer, 1990). It has been suggested, following on from this theory, that the extension of fantasy play to incorporate an IC supports a child with this exploration in what they deem to be a safer environment (Singer & Singer, 1990; Taylor et al., 1993). This theory, again, supports the notion that those who create an IC would have a predisposition to engage in fantasy play.

As discussed earlier, imagination and creativity have both been shown to be features of children who engage in fantasy play and IC play (Hoff, 2005; Schaefer, 1969; Singer & Singer, 1990). Imagination in adults who recall having an IC has also been shown to be higher than those who did not have an IC in childhood (Gleason et al., 2003). This suggests that the skills needed for both fantasy play and IC play are similar, and provides further support for the link between the two.

With the above considered, it is perhaps unsurprising that the current research supports previous research in finding a link between fantasy play and IC play. While the current study asked participants about their fantasy play predisposition in childhood, research suggests that this is something which continues into adulthood. Research has shown that adults who recalled having an IC in childhood also reported a higher interest in fantasy during their adult years (Dierker et al., 1995), something which may be interesting for further study. However, many of the adult measures currently in use for fantasy proneness in adults do not specifically investigate fantasy play, but fantasy in more broad terms. An example of such a scale is the Creative experiences questionnaire (Merckelbach, Horselenberg & Muris, 2001), which measures fantasy proneness in terms of fantasising, a belief in the paranormal and imagination. Additionally, it may be questioned whether adults participate in fantasy play specifically. Past research has primarily focused on fantasy play within childhood, with early theorists arguing that such play exists only in childhood (eg. Piaget, 1945; Vygotsky, 1978). Goncu and Perone (2005) argued that this viewpoint comes from the idea that children are 'supposed' to play and adults are 'supposed' to work, with any time spent playing in adulthood being viewed as a waste. They go on to argue that, due to

the dominant theorists holding the belief that play is for childhood, the area of adult fantasy play has not been subsequently studied. However, there are adult activities which can be similarly compared to the pretend play which has been observed in childhood. As previously mentioned, fantasy play involves treating reality in an altered form, or putting a pretend 'layer' over reality (Austin, 1979), both knowingly and meaningfully in a playful manner (Lillard, 1993). With this definition in mind, many adult activities may be considered as fantasy play. For example, actors often pretend to be a character who does not reflect who they are in reality, in a pretend world, with other actors pretending to be their family, friends and acquaintances. These actors are aware that this is not reality, but 'layer' this pretence over. However, it could be argued that this is not playful, and most actors do so for work purposes. With this being said, an activity such as live action role play (LARP) very closely resembles fantasy play in childhood. LARPing involves pretending to be a character and acting out their role within an imaginary world (Harviainen, 2011). This is often done without an audience, and completely in the spirit of play, with those involved being aware that what they are acting out is not reality, but pretending for fun. This adult activity very closely resembles childhood fantasy play. A further example can be found in some universities within the US and UK currently, where students join 'Quidditch' teams. This is an activity taken from the Harry Potter series of novels, in which students pretend to fly on broomsticks and score goals against an opposing team. Again, this is an activity in which pretence is 'layered' over reality, with the adults knowing that they are not flying, but pretending that they are in the interest of fun and play. With these examples considered, it seems that activities closely resembling fantasy play do exist in adulthood. Therefore, it may be useful to develop a scale which measures fantasy play specifically in an adult population for use in future research.

As has been previously discussed, the link between IC play and a predisposition toward fantasy play in childhood is one which has been found across studies using a variety of methodologies. Along with the support found from the results of the current study, the link

between having an IC and having a predisposition to fantasy play seems to have real strength. Having said this, it is important to consider the differing definitions of an IC that have been used in previous studies. Some did not specify a type of IC (eg. Gleason et al., 2003; Taylor et al., 1993; Dierker et al., 1995), some asked about an imagined character (eg. Bouldin, 2006; Bouldin & Pratt, 1999), while some included impersonation in the definition of an IC (eg. Ames & Learned, 1946; Carlson & Taylor, 2005; Taylor & Carlson, 1997; Taylor et al., 2004). Although the definition of ICs does not negate the findings indicating a link between the creation of an IC and a predisposition to fantasy play, it may be worth investigating this link with a specific definition of an IC given to participants in future research. This may lessen the chance of a participant being categorised into the non-IC group when they perhaps should not be. It may also be interesting to investigate whether the link between ICs and a predisposition to fantasy play remains constant when each type of IC is investigated independently.

A further point to consider is style of fantasy play, which it has been argued can differ between children. These suggested styles include scary fantasy, heroic fantasy, aggressive fantasy, intellectual fantasy, fanciful fantasy and dysphoric fantasy, with the frequency, vividness and absorption in the fantasy also being taken into account (Rosenfeld, Huesmann, Eron & Torney-Purta, 1982). A study by Bouldin (2006) investigated this and found that children with an IC not only have a predisposition to fantasy play, but also have varied styles of fantasy play. Having said this, Bouldin (2006) used the definition of an IC as an entirely imagined character, and did not include personified objects or impersonation. This means that those who had a different form of IC were categorised into the non-IC group and does not, therefore, give a full picture regarding the fantasy play styles of children with differing ICs. It would add to the broader knowledge base to investigate the styles of fantasy play outlined by Rosenfeld et al. (1982) in future research, perhaps including the differing definitions of ICs.

The effect of gender on the predisposition toward fantasy play was also found to have a significant effect, with females being more likely to show a higher predisposition. Though this was not a main focus point of this study, it is interesting to mention that previous studies have found that females are more likely to engage in fantasy play (Fein, 1981; Jones & Glenn, 1991; McLoyd, 1980) and are more likely to create an IC (Ames & Learned, 1946; Carlson & Taylor, 2005; Dierker et al., 1995; Hoff, 2005; Hurlock & Burstein, 1932; Jersild et al., 1933; Manosevitz et al., 1977; Mauro, 1991; Pearson et al., 2001; Svendsen, 1934; Taylor & Carlson, 1997). With the current study finding that females are more likely to show a higher predisposition towards fantasy play, this further supports previous research. Additionally, this similar finding in relation to gender differences supports the validity of the measure used within the current study.

H2 - ICs and Shyness

It was predicted that a relationship would be found between recalled ICs in childhood and shyness in adulthood. The results from this study do not support this hypothesis, with no significant difference in shyness being found between participants who recalled having an IC in childhood and those who did not. It has been suggested that shyness develops due to poorly developed social skills, leading children to withdraw socially due to the fear of negative social evaluation from peers (Coplan et al., 2004). This can lead these shy children to create an IC to compensate for the lack of social interaction from peers (Manosevitz et al., 1973) and to buffer the feelings of loneliness that this causes (Caplan & Caplan, 1973; Hoff, 2005). The current research findings do not support this link between shyness and ICs. However, the above research was focused around the social skills of children which the current research was not. It may be the case that the adult participants in the current study who recalled having an IC in childhood did have poor social skills and were shy in childhood, leading them to create an IC. However, they may have developed their social skills later in life, and thus were not shy adults when participating in the current research. Additionally, it has been argued that having an IC gives children the chance to practice social interactions

(Somers & Yawkey, 1984), which may give them the chance to develop their social skills in spite of having poor social relationships with peers. This could explain the lack of a difference in shyness into adulthood found in this study, in that children with an IC may practice social interactions and be able to use these skills to develop social relationships later in life. Furthermore, it has been suggested that shyness shown in childhood may not be a trait which is carried through into adulthood (Degnan & Fox, 2007). As previously mentioned, Degnan and Fox (2007) suggested that this would be the case if shy children learned to control the tendency to focus on perceived threat in social situations over time. If shy children with an IC learned to control this tendency and, as such, did not carry their shyness into adulthood, this may explain the lack of a difference in adult shyness scores in the current study.

However, in contrast, previous research has also found that children who have an IC are less shy (Mauro, 1991), have better social skills (Partington & Grant, 1984) and are more sociable in adolescence (Seiffge-Krenke, 1997; Singer & Singer, 1990) than children who do not have an IC. Furthermore, it has been shown that adults who recalled having an IC are less shy and show higher levels of sociability in adulthood (Singer & Singer, 1990). Again, the current research results do not support these findings, with no difference in adult shyness being found. However, it is important to note that both the studies conducted by Mauro (1991) and Partington and Grant (1984) relied on parental reports of whether their children had an IC. As previously discussed, these types of studies may be a potentially inaccurate measure of children's ICs (Taylor et al., 1993; Taylor & Carlson, 1997), with many parents not being aware that their child has an IC (Jersild, 1968). Even within their study, Partington and Grant (1984) found discrepancies between the accounts from children regarding the existence of an IC and their parent's knowledge of this existence. Therefore, studies of this nature may not give a full idea of the social skills and shyness of children with an IC. Furthermore, as previously discussed, Seiffge-Krenke (1997) investigated participants' diary entries, and whether diary entries were addressed to a particular person

(an imagined entity). If diary entries were addressed to a particular person, participants were categorised as having an IC. Though this self-report measure may have given a more reliable measure of the existence of an IC, this is an entirely different methodology than was used within the current study. Consequently, it is questionable whether the results from the current study are comparable to those of Seiffge-Krenke (1997). It is entirely possible that those who have an IC as defined by Seiffge-Krenke (1997) show different personality traits than those who had an entirely imagined character or personified object IC, as defined in the current study. Additionally, it could be argued that shy participants within the Seiffge-Krenke (1997) study may not have been comfortable revealing intimate details regarding their diary entries, and therefore did not truthfully reveal whether their diary was addressed to an imagined entity.

The current study findings in regards to ICs and shyness in adults does have some support from previous research. For example, although not measuring shyness directly, Gleason et al. (2000) and Gleason (2004) found that children with and without ICs did not differ in the amount of friends that they have, or in regards of peer acceptance. This suggests that they were no more socially withdrawn or shy than their counterparts who did not have an IC. Furthermore, Gleason et al. (2003) found in a retrospective study similar to the methodology used in the current study, that adults who recalled having had an IC did not differ in terms of shyness compared to those who did not. This gives further support to the notion that, even if shyness is linked to having an IC in childhood, this is not a trait which persists into adulthood.

However, it is worth mentioning that in both Gleason et al. (2003) and the current study, the question regarding ICs concerned whether the participants had an IC in 'childhood'. It is notable that no definition of 'childhood' was offered in either study, leaving this open to interpretation by the participants. This ambiguity could have led to confusion, with participants who may have considered their teenage years to be 'adolescence' and not 'childhood'. In which case, such participants may have answered that they did not have an

IC in childhood, though may have had one during adolescence. This is a life stage in which ICs have been shown to exist (Seiffge-Krenke, 1993, 1997), though, as previously mentioned, with a different definition of IC being used by Seiffge-Krenke as was used in the current study.

Additionally, it could be considered as to what shyness actually is. From a biological standpoint, it has been argued that some children are innately predisposed to being more timid when presented with a social situation (Kagan, 1997). This has been supported by research which has shown that shy children struggle to regulate their arousal levels when faced with social situations compared to non-shy children (Spangler & Schieche, 1998). Also, shy children have been shown to have higher cortisol levels when faced with these situations (Schmidt et al., 1999), suggesting higher stress levels when in social situations. A further explanation of shyness, based around attachment theory (Bowlby, 1958) suggests that shy children did not have a secure attachment with a parental figure during infancy. It is suggested that this insecure attachment lead to an internal working model in which children see the world around them as scary, and are subsequently afraid to explore their social surroundings (Sroufe, 1988). However, as previously mentioned, it may be the case that having an IC helps these innately shy children to overcome their fears of social situations by giving them a chance to socially interact in a non-threatening environment that they themselves control (Singer & Singer, 1990; Taylor, 1999; Taylor et al., 1993). With this practice, shy children may grow into adults who are no more shy than their counterparts who did not have the need for an IC to overcome any fears of social interaction. The previously discussed suggestion from Degnan and Fox (2007), that shy children may not carry this trait into adulthood if they learn to control a tendency to focus on perceived threat in social situations, may support this. Perhaps having an IC, and the chance to practice social interactions, can aid in controlling the focus on perceived threat.

Having said this, studies using factor analysis have shown shyness to be a personality trait in childhood, adolescence and adulthood (Shiner & Caspi, 2003; Crozier,

1979). However, it has also been suggested that shyness falls on two separate dimensions within personality. Shyness can be identified as either 'introverted social shyness', in which a person may enjoy solitude but has the ability to socially interact with others, or 'neurotic social shyness', in which a person feels anxious when faced with social situations (Eysenck & Eysenck, 1969). Further to this, there have been suggestions that shyness is a multidimensional construct, with two different forms - 'fearful' or 'self-conscious' shyness (Buss, 1986), which are two separate constructs (Younger, Schneider, Guirguis & Bergeron, 2000). It may be interesting for future studies to investigate these types of shyness in relation to having an IC in childhood.

H3 - ICs and Rejection Sensitivity

It was predicted that adults who recalled having an IC in childhood would be more sensitive to rejection. The results from this study do not support this hypothesis, with no significant difference in rejection sensitivity being found between participants who recalled having an IC in childhood and those who did not.

Rejection sensitivity may be closely linked to shyness in that it has been suggested that shyness leads to social withdrawal in children, which may be seen as maladaptive by peers (Younger et al., 1993) leading to social rejection. If this social rejection is continued, this may lead to a child who is sensitive to rejection and avoids any social situation which carries a high risk of rejection (Bourgeois & Leary, 2001; MacDonald & Leary, 2005). This suggests that there is a cycle effect between shyness and rejection sensitivity, in that children who are shy socially withdraw, are consequently continually socially rejected, develop rejection sensitivity because of this and withdraw further. As previously mentioned, this lack of peer interaction may lead to a child creating an IC to buffer the feelings of loneliness (Caplan & Caplan, 1973; Hoff, 2005; Manosevitz et al., 1973). Support for this comes from research conducted by Bouldin & Pratt (2002), which found that children who have an IC show anxiety toward meeting the expectations of others. This is also something which has been shown in adolescence, with those who report having had an IC in childhood

showing higher anxiety levels when in social situations (Bonne et al., 1999). This research suggests that children and adolescents who have/had ICs are more prone to rejection sensitivity as they show anxiety when in situations which may carry the risk of rejection from peers.

However, the results from the current study do not support this within the adult population used. It may be the case that rejection sensitivity from childhood and adolescence is not a characteristic which is carried through to adulthood. This is an area which has seen very little previous investigation. However, the previously discussed research study conducted by Gleason et al. (2003) which used a retrospective survey design, found that participants who recalled having an IC in childhood were more likely to engage in behaviours oriented toward pleasing others, regardless of their own wishes. The researchers suggested from their study that participants 'appear to place a high value on harmony with others, even if it means going against their own desires' (Gleason et al., 2003, p. 733). The adults in this study who recalled having an IC in childhood were likely to go against what they wanted to do in a social situation to avoid any rejection from their peers. This suggests that they had a higher sensitivity to rejection than those who did not recall having an IC in childhood. While these results seem to contradict the findings from the current study, the Gleason et al. (2003) study was not specifically measuring rejection sensitivity in adults who recalled having an IC, and as such did not use a rejection sensitivity measure. This could explain the differences found between these results and those found in the current research. Furthermore, the research conducted by Gleason et al. (2003) used a population of only females, and this difference in methodology, when compared to the current study, may account for differences in findings. Research has found that females show higher stress levels when faced with social rejection scenarios than males do (Stroud et al., 2002), suggesting that females are more likely to experience rejection sensitivity than males are. It may be that the inclusion of males within the current study could have lowered

the average rejection sensitivity scores, and could explain the differences in findings between this study and the study conducted by Gleason et al. (2003).

Furthermore, it has been suggested that, in childhood, girls may be more encouraged by parents than boys are to engage play with an IC (Jersild, 1968), which may have caused the males in the current study to be reluctant to admit to having had an IC in childhood. This may explain the differences found between the current study's results and the results from Gleason et al. (2003), as the males within the current study may not have been entirely truthful about whether they recalled having an IC. A further point is that boys have been found to be more likely to engage in impersonation play (Ames & Learned, 1946; Carlson & Taylor, 2005). While this has been stated as a form of having an IC in recent definitions (Harris, 2000), this was not given as a definition of an IC within the current study. It could have been that the males within this study had engaged in impersonation play, but not realised that this constituted having an IC. These points have two implications for future research, one being that it may be interesting to investigate the effects of having a childhood IC on rejection sensitivity in adulthood in males and females separately; and the other being a need for a standardised definition of an IC for future researchers to use.

On the other hand, there is previous research which supports the findings from the current study, for example, it has been found that children with ICs have an equal number of friends to those who do not (Gleason et al., 2000; Manosevitz et al., 1973; Masih, 1978). This suggests that children with an IC are no more likely to be sensitive to rejection than those without, as they are unlikely to have experienced continued social rejection and to have subsequently developed a sensitivity to rejection. Further to this, children who have an IC have been found to have better social skills than those who do not (Partington & Grant, 1984), which indicates that these children will successfully make and maintain friendships, as children with good social skills are highly accepted by peers (Connolly & Doyle, 1981; Howes, 1988). Again, this suggests that children who have an IC are unlikely to experience social rejection. Though this suggests that those with and without an IC are unlikely to show

differences in rejection sensitivity, as was found in the current study, it is important to note that previous research has focused on childhood, and not adulthood. As previously mentioned, it has been found that ICs have been reported in participants as old as 17 years (Seiffge-Krenke, 1993, 1997), and so it is important to further consider the effects that this may have on social rejection within late adolescence and adult years.

H4 – Relationship Between Shyness and Rejection Sensitivity

The current study predicted that there would be a relationship between shyness and rejection sensitivity. The results support this hypothesis, with a significant positive relationship being found between the two. The relationship between shyness and rejection sensitivity has seen very little previous research. Though, existing previous research suggests that a shy person is one who is likely to become sensitive to rejection due to shyness being seen as maladaptive, and consequently being continually socially rejected by peers because of this (Younger et al., 1993). This is a theory which the results from the current study supports.

With the current research results, it could be argued that shyness and rejection sensitivity form a cycle effect, in that shyness leads to social withdrawal, leading to continued social rejection, leading to rejection sensitivity and further shyness. Though the current study did not directly measure social withdrawal, this has been suggested as one of the main features of shyness (Heiser et al., 2009). This suggested model seems likely considering the findings from the multiple regression analysis that both shyness and rejection sensitivity predict each other. This theory is supported by findings which show that people socially withdraw from social situations when they perceive the likelihood of social rejection as being high (Bourgeois & Leary, 2001; MacDonald & Leary, 2005). Furthermore, rejection sensitivity has been found to be a predictor for social withdrawal (London et al., 2007; Watson & Nesdale, 2012). Again, with social withdrawal being a main feature of shyness (Heiser et al., 2009), this arguably supports the current research findings concerning the relationship between rejection sensitivity and shyness. However, as

previously mentioned, the participants in the London et al. study (2007) were largely from a disadvantaged, minority background. As this is a population which may often face rejection from others (Quintana & McKown, 2008), the participants may have been more sensitive to rejection than a wider population. With this being said, the opposite could be argued for the current study's population, in that it comprised of a largely white participants, but with the current study still finding a similar link between rejection sensitivity and shyness.

Additionally, Watson and Nesdale (2012) used a similar methodology to the current study, but using the Rejection sensitivity questionnaire (Downey & Feldman, 1996), rather than the adult version of this questionnaire (Berenson et al., 2009). Watson and Nesdale (2012) and the current study found similar results, giving further strength to the finding of a predicative relationship between rejection sensitivity and shyness.

Additionally, previous research has found that individuals who are sensitive to rejection are avoidant of meeting new people in an uncertain social situation (Levy, Ayduk & Downey, 2001). Furthermore, research suggests that shy people are less likely to participate in a conversation due to an anticipation of what they say being taken in a negative way by peers (Crozier, 2002). This suggests that shy people are sensitive to rejection in that they would rather not participate in conversation due to anticipating possible rejection from peers. This research gives strength to the notion that rejection sensitivity is linked to shyness, and vice versa.

Given the discussed research, and the findings from the current research, it can be suggested that rejection sensitivity works on a continuing cycle of social withdrawal and avoidance due to fears of negative evaluation from peers. However, this does not seem to have been specifically studied before, and so future research seems warranted to further explore this theory.

H5 – Relationship Between Fantasy Play and Rejection Sensitivity

The current study predicted that there would be a negative correlation between fantasy play predisposition in childhood and rejection sensitivity in adulthood. The results did not support this hypothesis, with no significant relationship being found between the two. Considering that rejection sensitivity is thought to develop due to continued social rejection, and that previous research has found that children who engage in fantasy play have better social skills than those who do not (Connolly & Doyle, 1984; Garvey, 1977; Rubin & Maioni, 1975), it could be assumed that children who engage in fantasy play are less likely to experience social rejection. Thus, it would be expected that children who engage in fantasy play would be less likely to have a sensitivity to rejection. However, the current research findings do not support this.

It may be important to consider whether rejection sensitivity is a constant construct of a person's personality, or whether one's sensitivity to rejection changes over time. It may be the case that fantasy play shares a relationship with rejection sensitivity in childhood, but that once a person reaches adulthood, this relationship no longer exists, due to other variables that can affect an individual from childhood through to adulthood. For example, it has been found that, during transitional periods in adolescence, sensitivity to rejection can lessen as individuals gain more acceptance from peers (London et al., 2007). Additionally, the loss of social support in late adolescence seems to have an impact on rejection sensitivity, as does gender, with males showing an increase in rejection sensitivity in late adolescence when compared to females of the same age (Marston, Hare & Allen, 2010). The discussed research suggests that rejection sensitivity may be a changing construct over time. Therefore, it may be that fantasy play and rejection sensitivity in childhood share a relationship, but not one that persists through adolescence and into adulthood.

Whether adult engagement in fantasy play and rejection sensitivity share a link would be interesting for future studies to evaluate, though as previously discussed, there is currently no scale which measures adult participation in fantasy play specifically. The

development of such a scale would give scope to investigate whether adult engagement in fantasy play (such as the previously mentioned LARPing and Quidditch playing, for example) shares a relationship with adult rejection sensitivity.

H6 – Relationship Between Fantasy Play and Shyness

The current study predicted that there would be a negative correlation between childhood fantasy play predisposition and shyness in adulthood. The results did not support this hypothesis, with no significant relationship being found between the two. There are many theories regarding what shyness is and how it is developed. As previously discussed, from a biological standpoint shyness is argued as innate, with some people being predisposed to being more timid and showing signs of high stress when in a social situations (Kagan, 1997; Spangler & Schieche, 1998). Interestingly, Daniels and Plomin (1985) found that parental reports of infant shyness and mothers' own reports of their shyness shared a positive correlational relationship. This suggests that shyness is innate, however, this same result was found when adoptive mothers were used as participants, suggesting an environmental factor. Additionally, it may be that shyness is a learned behaviour as shy mothers may not introduce their infants to new social experiences (Kagan, Kearsley & Zelazo, 1977; Schaffer, 1966). Karmiloff-Smith (1992) argued that both genes and environment play a role in development, suggesting that even an innately shy child may be influenced by environmental factors, such as the engagement in fantasy play.

A further viewpoint, based around attachment theory (Bowlby, 1958) suggests that an insecure attachment with parents during infancy leads to an internal working model in which a child sees the world as a scary place and is afraid to explore (Scroufe, 1983). From this perspective, a child who had an insecure attachment is unlikely to explore their environment and build social relationships. This may result in an individual who is socially withdrawn and shy through to adulthood. However, it must be considered, again, that environmental factors after infancy may influence shyness. The engagement in fantasy play may give a child the skills to practice social interactions in a non-threatening environment

(Singer & Singer, 1990), and give them the confidence to build social relationships.

However, the results from the current study suggest that the fantasy play predisposition in childhood and shyness in adulthood do not share a relationship.

Finally, shyness has been linked to poor social skills, in that children with poor social skills socially withdraw due to anxiety when being faced with a social situation due to fear of negative social evaluation from peers (Coplan et al., 2004). As previously discussed, the engagement in fantasy play has been linked to good social skills (Connolly & Doyle, 1984; Garvey, 1977; Rubin & Maioni, 1975), and so it could be argued that children who engage in fantasy play would be less shy than those who do not. However, again, the results from the current study do not support this. This suggests that any relationship between fantasy play and shyness in childhood is not one which is consistent over time. This is a notion which has support from Degnan and Fox (2007) who suggested that shyness may not be carried through to adulthood.

Future Research Directions and Limitations

The results from this study have several implications, many of which have not previously been explored, particularly in adulthood. The link found between having an IC and showing a higher predisposition to fantasy play in childhood seems to be consistent over various research studies (eg. Bouldin, 2006; Taylor, 1999; Taylor & Carlson, 1997; Taylor et al., 1993), with the current study adding further strength to this. However, many studies have been mixed in their definitions of an IC, and there seems to be a need for a standardised definition amongst researchers to ensure future research is comparable. This seems to be specifically important when including male participants in research, who have been shown to use impersonation as a form of having an IC more than having a personified object or entirely imagined character (Ames & Learned, 1946; Carlson & Taylor, 2005). Without this standardised definition from researchers, a true representation of the differences between those who did and did not have an IC in childhood is unlikely to be found.

Furthermore, the vast majority of research into this area focuses on the effects of having an IC within childhood, with few studies looking at the effects of having an IC into adolescence and adulthood. Additionally, within retrospective research, the definition of 'childhood' is seemingly non-existent, including within the current research. Because of this, there is ambiguity and subjectivity on the part of the participants, which may result in findings which are inaccurate. For these reasons, it seems important for future research to define the age range in which they are interested to remove any subjectivity on the part of the participants.

The current study suggests that there is a positive predictive relationship between shyness and rejection sensitivity. Though there are research findings which can be somewhat comparable to the current findings (eg. London et al., 2007; Watson & Nesdale, 2012), there does not seem to be any previous research which is focused on the relationship between shyness and rejection sensitivity specifically. Therefore, further research into this relationship is needed, to continue to grow this knowledge base.

While no relationships were found between fantasy play in childhood and shyness and rejection sensitivity in adulthood, this is an interesting finding in itself. It suggests that shyness and rejection sensitivity may not be consistent over time, or may have many other variables which influence their development. For this reason, future research may wish to assess the changes in these variables over time to give more insight into how they change and develop. Furthermore, the engagement in fantasy play over time and into adulthood, and the relationship that this may have with these variables, would be interesting for further study. Though, this seemingly requires the development of a measure of fantasy play in adults specifically.

It is worth noting that the current study, and those before it which have investigated similar areas (eg. Kidd et al., 2010; Gleason et al., 2003) used retrospective designs. While retrospective designs may have issues regarding accurate recall from participants, this methodology has been shown to be highly accurate in terms of recall (Baumgarten et al.,

1983; Stewart et al., 1987). However, future research where permitting, may wish to use a longitudinal study design to further assess how ICs, fantasy play engagement, shyness and rejection sensitivity develop over time. Additionally, it may be worth future research considering a qualitative research design, which may give scope for further, in depth, data regarding ICs, fantasy play, shyness and rejection sensitivity.

Finally, it is worth noting that this research study had a relatively small number of participants, and as such, future research is needed to further investigate the effects of having an IC in childhood on adult outcomes of shyness and rejection sensitivity with a larger population. Additional research can also add to the knowledge base surrounding the relationships between childhood fantasy play predisposition and adult shyness and rejection sensitivity.

Conclusion

The results from the current study showed that those who had a childhood IC showed a significantly higher predisposition to fantasy play in childhood. However, results showed that having a childhood IC did not have an effect on adult shyness or rejection sensitivity. Additionally, a positive relationship was found between adult rejection sensitivity and shyness. However, no significant relationships were found between childhood fantasy play predisposition and adult shyness or adult rejection sensitivity.

While this research adds to the knowledge base within this area, it also highlights the need for future study to continue investigations into the effects of having an IC in childhood on the adult outcomes of shyness and rejection sensitivity, and how these factors may change over time. Hopefully, this research can serve as a base for continued investigations into this understudied area.

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Appendix A

Facebook Messenger Participation Advertisement

'Hello, my name is Sarah Rafferty and I am currently undertaking some psychological research at the University of Chester which examines the relationship between childhood fantasy play and rejection sensitivity and shyness in adults. If you are interested in taking part in this research, please send me a private message for more information.'

Appendix B

University of Chester Research Participation Site Advertisement

Study Name: A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults (online study)

Abstract: This is an online study consisting of four questionnaires that examines childhood fantasy play in relation to rejection sensitivity and shyness in adults.

Description: You are invited to take part in a research study that is investigating the relationship between childhood fantasy play and rejection sensitivity and shyness in adults. The results of the study will help us understand more about childhood fantasy play and its relationship with rejection sensitivity and shyness in adults.

As the questionnaires may be seen to ask about sensitive topics, it is possible that some participants may feel some discomfort. You have the right to withdraw at any point during the study by closing down your web browser, and you may also select 'prefer not to say' for any questions you do not wish to answer. However, an advantage of taking part is that the results of the study will help us understand the relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

The study may take up to 30 minutes, though we anticipate that most participants will be able to complete the study in about 20 minutes. You can receive two SONA credits upon completion. The study has been approved by the Department of Psychology Ethics Committee.

Duration: 30 minutes

Credits: 2

Researchers: Dr Julie Kirkham and Sarah Rafferty

Appendix C

Participant Information Sheet



A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults

You are being invited to take part in a research study within the Department of Psychology at Chester University. Before you decide to take part, it is important for you to understand why the research is being carried out and what it will involve. Please take the time to read the following information carefully. Take your time to decide whether or not you wish to take part. Thank you for reading this.

Background

Fantasy play is an enjoyable part of childhood which exists throughout most cultures in the world. As part of fantasy play children may create imaginary friends (ICs) in the form of completely imagined entities or personified toys (e.g., giving a favourite doll a personality.) (Klausen & Passman, 2007). Psychological research has suggested that fantasy play and ICs may be associated with differences in social characteristics, behaviours and abilities (Carlson & Taylor, 2005; Crozier, 2000; Roby & Kidd, 2008). The present study aims to investigate whether engaging in fantasy play and having an IC in childhood is associated with characteristics in adulthood such as shyness – the feeling of apprehension or anxiety when with other people, and rejection sensitivity - anxiously expecting and overreactions to social rejection.

What does the study involve?

The study will take no longer than 30 minutes to complete and involves answering a number of questions surrounding the topic area. Questions will be based around the topics of Imaginary Companions (ICs), fantasy play, Shyness and Rejection Sensitivity. If you feel that any of these topics are potentially sensitive to you, then please consider not taking part.

Will my data be confidential?

All data recorded will remain anonymous and can only be seen by those on the research team and those who are involved in the assessment of this work. Data will be stored on a secure password protected computer. Your data will not be passed on or individually published- only the group data will be discussed. Partially collected data may be used if sufficient for analytic purposes.

Benefits and Risks of the Research

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

If you choose to participate in this research you will contribute to academic research in the field of Imaginary Companions (ICs). If you have an RPS participant code, you will receive 2 credits for completing this study. The questionnaires used in this study are not clinical or diagnostic measures and shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives. There is a small risk that you may be distressed by some questions within the scale relating to childhood. If you are experiencing distress because of painful childhood experiences then completion of this study will not in any way help to access the help needed, however useful sources of support are provided (see bottom of page). Please don't take part in this study if you have recently undergone a traumatic event. Within the questionnaires there is a 'prefer not to say' option and you can withdraw at any time before you submit your data by closing down the browser, however once submitted your data cannot be withdrawn as it will be anonymous and thus unidentifiable.

What will happen to the results of the research study?

The results will be written up in an academic publication and may be presented at an academic conference. The data may then be combined with a previous data set and written up by Dr Julian Lloyd and Dr Julie Kirkham. Individuals who participate will not be identified in any subsequent report or publication only group data will be discussed.

All information which is collected about you during the course of the research will be kept strictly confidential. Participants should note that data collected from this project may be retained and published in an anonymised form. By agreeing to participate in this project, you are consenting to the retention and publication of data.

Do not hesitate to use the contact details provided below if you feel you have been affected by the study in any way.

Supervisor: Dr Julie Kirkham - j.kirkham@chester.ac.uk - Telephone: 01244 511 622

Student researcher: Sarah Rafferty - 1622410@chester.ac.uk

Other contact: Dr Julian Lloyd – Julian.lloyd@chester.ac.uk – Telephone: 01244 513 483

Useful Contact Details

Student Support and Guidance (University of Chester): student.welfare@chester.ac.uk
Telephone: 01244 511 550

Samaritans: Telephone: 116 123 Email: jo@samaritans.org

This project has been approved by the Psychology Research Ethics Committee at

Chester University

Appendix D

Participant Debrief Sheet



Debrief

Thank You for being a participant in the current study 'A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults'. The aim of this study is to *understand how imaginary companions and fantasy play during childhood relate to rejection sensitivity and shyness during adulthood*. If any of the topics in the questionnaire have affected you in any way there are useful contact details below. If you are experiencing distress because of painful childhood experiences, then completion of this study will not in any way help to access the help needed however useful sources of support are provided (see bottom of page). The responses to the survey will be kept anonymous and will be kept under password protection. Thank you for your participation in this study.

Contact Details

Supervisor: Dr Julie Kirkham - j.kirkham@chester.ac.uk - Telephone: 01244 511 662

Student researcher: Sarah Rafferty - 1622410@chester.ac.uk

Other contact: Dr Julian Lloyd – Julian.lloyd@chester.ac.uk – Telephone: 01244 513 483

Useful Contact Details

Student Support and Guidance (University of Chester): student.welfare@chester.ac.uk

Telephone: 01244 511 550

Samaritans: Telephone: 116 123 Email: jo@samaritans.org

Appendix E

Ethical Approval

Original Ethical Approval Application Form

Staff / Office Use Only

DOPEC NUMBER: _____

Umbrella project DOPEC number (staff) _____

APPLICANT SURNAME: Rafferty

Please complete all questions by underlining the correct response to facilitate correct processing

APPLICANT: UG PGT PGR STAFF
REVIEW PROCESS: Accelerated / Full
APPLICATION STATUS: NEW APPLICATION, MAJOR AMENDMENT, RESUBMISSION
APPLICATION FOR: DISSERTATION, TEACHING, RESEARCH & PUBLICATION
ATTENDENCE AT HEALTH & SAFETY BRIEFING: YES / NO / NA
INCLUSION OF RISK ASSESSMENT FORM: YES / NO / NA

NOTES ON THE ROLE AND FUNCTION OF THE DEPARTMENT OF PSYCHOLOGY ETHICS COMMITTEE.

- All decisions of the committee are based on the application form and reviewers comments ONLY. Forms should be as detailed and clear as possible. Verbal discussions are not considered as part of the application or review process.
- The review process strictly adheres to the University of Chester Research Governance Handbook and the BPS Code of Ethics.
- The decision of the committee is final. If you are a UG, PGT or PGR student you should discuss the decision of the committee with your supervisor. If you are a member of staff you may contact the chair of the committee for further clarification.

Before completing the form researchers are expected to familiarise themselves with the regulatory codes and codes of conduct and ethics relevant to their areas of research, including those of relevant professional organisations and ensure that research which they propose is designed to comply with such codes.

Department of Psychology Ethical Approval for Research: Procedural Guidelines.

University of Chester Research Governance Handbook

http://ganymede2.chester.ac.uk/view.php?title_id=522471

BPS Code of Ethics

http://www.bps.org.uk/system/files/Public%20files/bps_code_of_ethics_2009.pdf

BPS Code of Human Research Ethics

http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

BPS Guidelines for Internet-mediated Research

<http://www.bps.org.uk/system/files/Public%20files/inf206-guidelines-for-internet-mediated-research.pdf>

BPS Research Guidelines and Policy Documents

<http://www.bps.org.uk/publications/policy-and-guidelines/research-guidelines-policy-documents/research-guidelines-poli>

Any queries email: psychology_ethics@chester.ac.uk

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CHECK LIST.

Please complete the form below indicating attached materials. Prior to submission supervisors must confirm that they have reviewed the application by completing the supervisors column.

<i>Notes: Students to indicate where information is found, supervisor to confirm by ticking green column</i>	Supervisor confirmation	Information sheet	Letter	Email	Email info. page	Consent Form	PowerPoint	N/A
Brief details about the purpose of the study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact details for further information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explanation of how and why participant has been chosen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notification that materials/interviews are not diagnostic tools/therapy or used for staff review/development purposes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explanation participation is voluntary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of any incentives or compensation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of how consent will be obtained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If research is observational, consent to being observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Details of procedure so participants are informed about what to expect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of time commitments expected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of any stimuli used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explanation of right to withdraw and right to withdraw procedure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Option for omitting questions participant does not wish to answer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Procedure regarding partially completed questionnaires or interviews	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
With interviews, information regarding time limit for withdrawal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of any advantages and benefits of taking part	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Details of any disadvantages and risks of taking part	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information that data will be treated with full confidentiality and that, if published, those data will not be identifiable as theirs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debriefing details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dissemination information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further information (relevant literature; support networks etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Supervisor Signature:



Date: 22/02/17

DEPARTMENT OF PSYCHOLOGY
APPLICATION TO DEPARTMENTAL
ETHICS COMMITTEE



University of
Chester

**IN COMPLETING THE FORM UG & PGT STUDENTS PLEASE REFER TO YOUR
HANDBOOK**

Question 1: Working title of the study

Notes: The title should be a single sentence

A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

Question 2: Applicant, name and contact details.

Notes: The primary applicant is the name of the person who has overall responsibility for the study. Include their appointment or position held and their qualifications. For studies where students and/or research assistants will undertake the research, the primary applicant is the student (UG, PGT, PGR) and supervisor is the co-applicant.

Sarah Rafferty 1622410@chester.ac.uk
BSc hon. Psychology (Bangor University)
Undergoing MSc in Family and Child Psychology (University of Chester)

Question 3: Co-applicants

Notes: List the names of all researchers involved in the study. Include their appointment or position held and their qualifications.

Dr. Julie Kirkham
Programme leader of Family and Child Psychology MSc
BSc hon. Psychology and Criminology (Staffordshire University)
M.Res degree in Psychological research methods (University of Manchester)
PhD in Developmental Psychology (Manchester University)

Question 4: What are the start and end dates of the study?

Notes: If exact dates are unavailable, explain why and give approximate dates.

January 2017 – October 2017

Question 5: Is this project subject to external funding?

Notes: Please provide details of the funding body, grant application and PI.

This project is not subject to any external funding.

Question 6: Briefly describe the purpose and rationale of the research

Notes: In writing the rationale make sure that the research proposed is grounded in relevant literature, and the hypotheses emerge from recent research and are logically structured. PGR / Staff if this application is for a funded project please attach any detailed research proposals as appropriate.

Maximum word length (300 words)

Fantasy play is enjoyed by children from many parts of the World, and has been suggested to aid in a child's development in many different areas (Lewis & Ramsay, 2004; Astington & Jenkins, 1995; Nielsen & Dissanayake, 2000; Taylor & Carlson, 1997; Bates, Benigni, Bretherton, Camaioni & Volterra, 1979; McCune, 1995). Some children enhance their fantasy play by creating an imaginary friend (ICs), in the form of a completely imagined companion or giving a personality to an inanimate object, such as a doll (Klausen & Passman, 2006). It has been suggested that fantasy play and ICs may be associated with differences in social characteristics, behaviours and abilities (Roby & Kidd, 2008). Research has shown that children who partake in fantasy play and have ICs are perceived as having lower social skills by teachers (Harter and Chao, 1992) and as having fewer friends and a poor self-image (Hoff, 2005). However, it has also been argued that children with ICs have better social skills than their counterparts without ICs, due to practiced social interactions (Somers & Yawkey, 1984). Furthermore, it has been found that, in adulthood, those who had ICs as a child show decreased levels of shyness and are more sociable than those who didn't have an IC in childhood (Singer & Singer, 1990).

There seem to be contradicting results into the effects of having an IC, and with 65% of children reporting that they do/did (Taylor, Carlson, Maring, Gerow & Charley, 2004), the effects that this may have into adulthood are important to investigate, with this being a very under researched area.

This research will investigate the effects that participating in fantasy play and having an IC in childhood have into adulthood, specifically how this effects an adult's levels of shyness and rejection sensitivity. It will also be investigated how shyness and rejection sensitivity are related to each other in adulthood, which is also an understudied area. It is expected that engaging in fantasy play and having an IC in childhood will have an effect on the levels of shyness and rejection sensitivity in adulthood, and that these characteristics will be interrelated.

Question 7: Describe the methods and procedures of the study

Notes: Attach any relevant material (questionnaires, supporting information etc.) as appendices and summarise them briefly here (e.g. Cognitive Failures Questionnaire: a standardised self-report measure on the frequency of everyday cognitive slips). Do not merely list the names of measures and/or their acronyms. Include information about any interventions, interview schedules, duration, order and frequency of assessments. It should be clear exactly what will happen to participants. If this is a media based study describe and list materials include links and sampling procedure. (500 words)

Participants will be invited to partake in the study via the University of Chester RPS system and via social media private messages (to ensure all participants are above the age of 18). The study aims to get between 60 and 100 participants in total. Participants will be directed to a website, hosted by Bristol online survey, which will contain an information sheet (see appendix A) outlining the purpose of the study, advise on sources available if they experience any distress, contact information for researchers, that the questionnaires used are not clinical or diagnostic measures and that shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives. If participants consent to continue, they will be taken on to complete questionnaires for each measure. For the independent variables of the partaking in fantasy play and having an imaginary companion, the Demographics, Imaginary Companion and Fantasy Play Scale will be used (see appendix B). This will determine whether participants had an imaginary friend, and if so, whether this was an imagined entity or a personified object, the age that they were when this took place and the duration that they had their imaginary companion. It will also determine whether participants partook in fantasy play, and to what extent. For the dependant variable of shyness, the Revised Cheek and Buss Shyness Scale (Cheek, 1983) will be used (see appendix C). This will ask questions related to shyness and ask participants to rate their answer on a scale of 1-5 to determine the level of shyness of each participant. Finally, the dependant variable of rejection sensitivity will be measured using the Adult Rejection Sensitivity Questionnaire (ARSQ) (Downey, Berenson & Kang, 2006) (see appendix D). This will, again be a scale measure, giving participants scenarios and asking them to rate their levels on anxiety on a scale of 1-6.

Once all the questionnaires have been completed, participants will be asked if they are sure that they wish to submit their data, and will be informed that once submitted, their data cannot be withdrawn from the study.

Once the participant has submitted their data, they will see a debrief sheet (see appendix E) thanking them for their participation, outlining the purposes of the study and directing them to the sources of help for anyone who may be feeling any distress due to their participation in the study.

Question 8: Has the person carrying out the study had previous experience of the procedures? If not, who will supervise that person?

Notes: Say who will be undertaking the procedures involved and what training and/or experience they have. If supervision is necessary, indicate who will provide it.

The primary applicant has experience of research on infant language development, however, no experience of research in this area or with this type of procedure, and so will be supervised by the co-applicant, Dr. Julie Kirkham.

Question 9: What ethical issues does this study raise and what measures have been taken to address them?

Notes: Describe any discomfort or inconvenience that participants may experience. Include information about procedures that for some people could be physically stressful or might impact on the safety of participants, e.g. interviews, probing questions, noise levels, visual stimuli, equipment; or that for some people could be psychologically stressful, e.g. mood induction procedures, tasks with high failure rate. Discuss any issues of anonymity and confidentiality as they relate to your study, refer to ethics handbook and guidance notes at the end of the form. If animal based include ethical issues relating to observation.

All participants will be given to chance to read an information sheet (see appendix A) before beginning the questionnaire which will outline the purpose of the study and informs participants that their data will remain anonymous, will only be accessible by the lead researchers and the MSc student and will be stored on a secure, password protected computer.

Participants will also be advised that the questionnaires used in the study are not clinical or diagnostic measures and that shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives. They are informed that if they experience any distress due to childhood memories, then completion of the study will not help in any way to access the help needed. However, there are support sources listed in the information sheet for participants to refer to should they feel the need to. Furthermore, each question will have a 'prefer not to say' option for those participants who don't feel comfortable answering a certain question.

Participants will also be informed that they can withdraw from the study at any point, but that this is only before submitting their data by closing the questionnaire browser. If a participant wishes to withdraw after starting the questionnaire, they can simply close their browser and not submit their data. It will be outlined that once the data is submitted it cannot be withdrawn, due to the anonymity of data meaning that each participants' data will be unidentifiable. Participants will not give written consent, but will consent by submitting their questionnaire. Once completed, participants will receive a full debrief letter (see appendix E), again, outlining the purpose of the study, that their data will be kept anonymous and that if they are experiencing any distress to look into the sources of support listed.

Finally, for those participants who are given a paper copy of the questionnaire, this will be given to them in an envelope and handed back to the researcher in the same envelope, giving the participant the chance to either hand back a blank copy of the questionnaire, or not hand back the envelope at all if they do not wish to participate. Any paper copies of questionnaires will not contain any participant information, and therefore will protect participants' anonymity.

Question 10: Who will the participants be?

Notes: Describe the groups of participants that will be recruited and the principal eligibility criteria and ineligibility criteria. Make clear how many participants you plan to recruit into the study in total.

Participants will primarily be students, but with other participants recruited through social media (Facebook) via private message. Ideally, the study will aim to recruit between 60 and 100 participants. Only people ages 18+ will be eligible to participate in the study.

Question 11: Describe participant recruitment procedures for the study

Notes: Gives details of how potential participants will be identified or recruited. Include all advertising materials (social media messages, posters, emails, letters, verbal script etc.) as appendices and refer to them as appropriate. Describe any screening examinations. If it serves to explain the procedures better, include as an appendix a flow chart and refer to it.

Participants will be primarily recruited using the University of Chester RPS system (see appendix F for RPS advertisement) and via social media (see appendix G for social media advertisement). The link to the study will not be posted on social media publicly, but will be privately messaged to ensure that the participant is above the age of 18.

Question 12: Describe the procedures to obtain informed consent

*Notes: Describe when consent will be obtained. If consent is from **adult participants**, give details of who will take consent and how it will be done. If you plan to seek informed consent from **vulnerable groups** (e.g. people with learning difficulties, victims of crime), say how you will ensure that consent is voluntary and fully informed.*

*If you are recruiting **children or young adults** (aged under 18 years) specify the age-range of participants and describe the arrangements for seeking informed consent from a person with parental responsibility. If you intend to provide children under 16 with information about the study and seek agreement, outline how this process will vary according to their age and level of understanding.*

How long will you allow potential participants to decide whether or not to take part? What arrangements have been made for people who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?

If you are not obtaining consent, explain why not.

Participants will not give written consent, but will be asked if they are sure that they wish to submit their data before closing the browser and that they will not be able to withdraw their consent after they have submitted their data.

Question 13: Will consent be written?

Yes/No (delete as appropriate)

*Notes: If **yes**, include a consent form as an appendix. If **no**, describe and justify an alternative procedure (verbal, electronic etc.) in the space below.*

Guidance on how to draft Participant Information sheet and Consent form can be found on PS6001 Moodle space and in the Handbook.

Participants will not give written consent, but will consent to their data being used by submitting their data electronically. Any participants who do not wish for their data to be used can simply close their browser before pressing submit.

Question 14: What will participants be told about the study? Will any information on procedures or the purpose of study be withheld?

Notes: Include an Information Sheet that sets out the purpose of the study and what will be required of the participant as appendices and refer to it as appropriate. If any information is to be withheld, justify this decision. More than one Information Sheet may be necessary.

No information will be withheld, and all participants will be given the chance to read an information sheet (see appendix A) outlining the full purpose of the study.

Question 15: Will personally identifiable information be made available beyond the research team (e.g. report to organisation)?

Notes: If so, indicate to whom and describe how confidentiality and anonymity will be maintained at all stages.

No, all data will be anonymous and no participants will be identifiable from any data. Further to this, the findings will be analysed at a group level, not at an individual level.

Question 16: What payments, expenses or other benefits and inducements will participants receive?

Notes: Give details. If it is monetary say how much, how it will be paid and on what basis is the amount determined. Indicate RPS credits.

Participants will not receive any monetary payments, but those who are University of Chester students accessing the study through the RPS system will receive two RPS credits for completing the study.

Question 17: At the end of the study, what will participants be told about the investigation?

Notes: Give details of debriefings, ways of alleviating any distress that might be caused by the study and ways of dealing with any clinical problem that may arise relating to the focus of the study.

Participants will be presented with a debrief sheet after completing the study, which will thank them for participating, outline the purpose of the study and will direct any participants who may be experiencing distress to the contact details outlined at the bottom of the page, which include contact details for the project supervisor, student support and guidance, the Samaritans and the Survivors Trust.

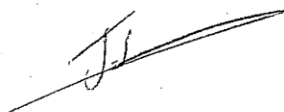
Question 18: What arrangements are there for data security during and after the study?

Notes: Digital data stored on a computer requires compliance with the Data Protection Act; indicate if you have discussed this with your supervisor and describe any special circumstances that have been identified from that discussion. Say who will have access to participants' personal data and for how long personal data will be stored or accessed after the study has ended.

All electronic data and materials will be stored on a password protected computer and paper copies of data will be kept in a locked filing cabinet. All data will only be accessible by the project supervisor and the MSc student, as well as Dr. Julian Lloyd who may be kept involved in writing up the project for publication. Following BPS guidelines, all data will be kept for up to five years for publication purposes.

Signatures of the study team (including date)

Notes: The primary applicant and all co-applicants must sign and date the form. Scanned or electronic signatures are acceptable.



Dr Julie Kirkham (22/02/17)



Sarah Rafferty (02/03/17)

ETHICS COMMITTEE DATE: 23/3/17

CHAIRS COMMENTS:

☒ Read and address all reviewers comments

- ① It should be made clear to participants that JL involved
- ② On the application there is mention of paper version of questionnaire but there are no details of how participants will be recruited or where will take place, all details refer to the online version.
- ③ Social media advert has link to study, participants should private message the researcher for the link. Take link out of advert.
- ④ Using the Survivors Trust as a point of reference is assuming a negative reaction. Tell participants not to take part if they have undergone a traumatic event recently.
- ⑤ On Appendix A change where it says the data will only be seen by the Student and their supervisor to the data will only be seen by those involved in the assessment of this work

face to face - script in appendices.
- envelope, jolies name - to catchley.

ACCEPTABLE

☐ Action: You may now commence with data collection subject to approval from any relevant external agencies.

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

- ☒ ACCEPTABLE SUBJECT TO SUBMISSION OF AMENDMENT FORM
- ☒ Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.
- ☐ Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.

ACCEPTABLE SUBJECT TO CONDITIONS LISTED BY CHAIR:

☐ Action: Resubmit application for full review ensuring you have completed section B

REVISE AND RESUBMIT:

☐ Action: Resubmit application for full review ensuring you have completed section B

SIGNATURE:

Maria E. Hafferty

References

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University of
Chester

**DEPARTMENT OF PSYCHOLOGY
ETHICS REVIEW FORM**

A) Applicant and submission details

Name of applicant: Sarah Rafferty

Project title: A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

Applicant status: ☐ UG ☒ PGT ☐ PGR ☐ Staff

If you are the applicant's supervisor, have you discussed ethical issues with the applicant?

☐ Yes, the applicant is an UG/PGT student and I wish to send the application for accelerated student review.

☒ Yes, the applicant is a UG/PGT student and I wish to send the application for full review.

☐ Yes, the applicant is a PGR student and I wish to send the application for full review.

☐ No → Comments:

B) Review of application

1. Has the applicant signed and dated the form?

a) ☒ Yes ☐ No → Return to applicant for signature before continuing with review process.

2. What is the submission type?

a) ☒ First submission to this or any other committee

b) ☐ Resubmission of a rejected application by this committee

• Is there a summary of the requirements of the committee? Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

c) ☐ Revised submission intended to replace an application approved by this committee

• Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

d) ☐ First submission to this committee; has been submitted to another committee.

• Is the original application attached? ☐ Yes ☐ No → Return to applicant for full details

3. Research Plan and Methodology

a) Is the study well formulated in terms of drawing on the relevant literature and is it methodologically, analytically and scientifically sound?

☒ Yes ☐ No Comments:

b) Are the timescales provided appropriate?

☒ Yes ☐ No Comments: Timetable is not asked for in the ethics form but the dates given for completion are commensurate with the period of the dissertation module

c) Are there contingency details?

☐ Yes ☒ No Comments: Contingency details are not asked for on the form, but recruitment via social media will be the contingency plan if recruitment via RPS is limited

- d) Is there consideration of how to minimise, manage and monitor issues of distress and harm, however minor?

☒ Yes ☐ No Comments: [Click here to enter text.](#)

- e) Are appropriate debrief details provided?

☒ Yes ☐ No Comments:

- f) Are appropriate details regarding the use and management of deception provided?

☐ Yes ☐ No ☒ N/A Comments:

4. Sample size, participants and recruitment

- a) Has the applicant provided appropriate details of the sample and how it will be identified?

☒ Yes ☐ No Comments:

- b) Has the applicant provided appropriate details of where the research will take place, including issues regarding permission and appropriate health and safety information? Is the necessary documentation attached?

☒ Yes ☐ No Comments:

If the applicant is a taught student and they did not attend the mandatory H&S briefing have they provided appropriate evidence that they have full and satisfactory awareness of the relevant health and safety protocol?

☐ Yes ☐ No ☐ N/A Comments:

- c) Has the applicant provided appropriate details and attached the necessary documentation concerning their recruitment procedures? In particular, have they appropriately considered how to minimise, manage and monitor issues of distress and harm?

☒ Yes ☐ No Comments:

Are there appropriate RPS credits? ☐ Yes ☐ No ☐ N/A

- d) Has the applicant provided appropriate details and attached the necessary documentation concerning the information made available to participants? In particular, are there appropriate considerations if using internet mediated research?

☒ Yes ☐ No Comments:

Is there appropriate consideration of how to manage issues of distress and harm?

☒ Yes ☐ No Comments:

Are there appropriate details regarding informed consent?

☒ Yes ☐ No Comments:

Are there appropriate details regarding anonymity and confidentiality?

☒ Yes ☐ No Comments:

Are there appropriate details regarding withdrawal procedures?

☒ Yes ☐ No Comments:

- e) Are there appropriate details regarding time commitment from participants?

☒ Yes ☐ No Comments:

- f) Are there appropriate details regarding compensation arrangements?

☒ Yes ☐ No Comments:

- g) If using social media for recruitment have details been provided on
- Proposed sites and social groups?
☐ Yes ☒ No Comments: Needs to state specifically that facebook will be used
 - Social media messages?
☒ Yes ☐ No Comments:

5. Data Collection and Analysis

- Has the applicant provided full procedural details and attached the necessary documentation concerning data collection procedures?
☒ Yes ☐ No Comments:

6. Data Analysis

- Has the applicant provided appropriate details concerning data analysis?
☒ Yes ☐ No Comments: Ethics form does not specifically ask for details of data analysis

7. Data protection and Storage

- Has the applicant provided appropriate details concerning data protection and storage? Have security issues been properly considered?
☒ Yes ☐ No Comments:

8. Dissemination

- Has the applicant provided appropriate details concerning research dissemination?
☒ Yes ☐ No Comments:
 Are there appropriate details regarding how privacy and confidentiality will be maintained during dissemination?
☒ Yes ☐ No Comments:
 Are there appropriate details regarding any specific considerations about sharing the research?
☒ Yes ☐ No Comments:

General comments: The current project follows a research design previously approved by the committee in a project by Dr Julie Kirkham and Dr Julian Lloyd. This student application is well prepared and covers the key ethical issues. To go for full review so that data can be used for publication purposes.

Review status

- ☐ Chair's action
☒ Staff/PGR for full review ☐ UG/PGT for full review
☐ Work with external agencies ☐ Work with vulnerable participants
☐ Other issues/concerns

NAME: Dr Julie Kirkham

☐ Supervisor ☒ Supervisor/Reviewer 1 ☐ Reviewer 1 ☐ Reviewer 2

DATE: 03/03/2017



University of
Chester

**DEPARTMENT OF PSYCHOLOGY
ETHICS REVIEW FORM**

A) Applicant and submission details

Name of applicant: Rafferty

Project title: A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

Applicant status: ☐ UG ☒ PGT ☐ PGR ☐ Staff

If you are the applicant's supervisor, have you discussed ethical issues with the applicant?

☐ Yes, the applicant is an UG/PGT student and I wish to send the application for accelerated student review.

☐ Yes, the applicant is a UG/PGT student and I wish to send the application for full review.

☐ Yes, the applicant is a PGR student and I wish to send the application for full review.

☐ No → Comments:

B) Review of application

1. Has the applicant signed and dated the form?

a) ☒ Yes ☐ No → Return to applicant for signature before continuing with review process.

2. What is the submission type?

a) ☒ First submission to this or any other committee

b) ☐ Resubmission of a rejected application by this committee

• Is there a summary of the requirements of the committee? Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

c) ☐ Revised submission intended to replace an application approved by this committee

• Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

d) ☐ First submission to this committee; has been submitted to another committee.

• Is the original application attached? ☐ Yes ☐ No → Return to applicant for full details

3. Research Plan and Methodology

a) Is the study well formulated in terms of drawing on the relevant literature and is it methodologically, analytically and scientifically sound?

☒ Yes ☐ No Comments:

b) Are the timescales provided appropriate?

☒ Yes ☐ No Comments:

c) Are there contingency details?

☐ Yes ☒ No Comments:

d) Is there consideration of how to minimise, manage and monitor issues of distress and harm, however minor?

☐ Yes ☐ No Comments: [Click here to enter text.](#)

e) Are appropriate debrief details provided?
☒ Yes ☐ No Comments:

f) Are appropriate details regarding the use and management of deception provided?
☐ Yes ☐ No ☒ N/A Comments:

4. Sample size, participants and recruitment

a) Has the applicant provided appropriate details of the sample and how it will be identified?
☒ Yes ☐ No Comments:

b) Has the applicant provided appropriate details of where the research will take place, including issues regarding permission and appropriate health and safety information? Is the necessary documentation attached?
☒ Yes ☐ No Comments:

If the applicant is a taught student and they did not attend the mandatory H&S briefing have they provided appropriate evidence that they have full and satisfactory awareness of the relevant health and safety protocol?
☐ Yes ☐ No ☐ N/A Comments:

c) Has the applicant provided appropriate details and attached the necessary documentation concerning their recruitment procedures? In particular, have they appropriately considered how to minimise, manage and monitor issues of distress and harm?
☐ Yes ☐ No Comments:

Are there appropriate RPS credits? ☒ Yes ☐ No ☐ N/A

d) Has the applicant provided appropriate details and attached the necessary documentation concerning the information made available to participants? In particular, are there appropriate considerations if using internet mediated research?
☒ Yes ☐ No Comments:

Is there appropriate consideration of how to manage issues of distress and harm?
☐ Yes ☐ No Comments:
 Are there appropriate details regarding informed consent?
☒ Yes ☐ No Comments:
 Are there appropriate details regarding anonymity and confidentiality?
☒ Yes ☐ No Comments:
 Are there appropriate details regarding withdrawal procedures?
☒ Yes ☐ No Comments:

e) Are there appropriate details regarding time commitment from participants?
☒ Yes ☐ No Comments:

f) Are there appropriate details regarding compensation arrangements?
☒ Yes ☐ No Comments:

g) If using social media for recruitment have details been provided on

a. Proposed sites and social groups?

X Yes ☐ No Comments: Only cited Facebook

b. Social media messages?

X Yes ☐ No Comments:

5. Data Collection and Analysis

a) Has the applicant provided full procedural details and attached the necessary documentation concerning data collection procedures?

X Yes ☐ No Comments:

6. Data Analysis

a) Has the applicant provided appropriate details concerning data analysis?

☐ Yes X No Comments:

7. Data protection and Storage

a) Has the applicant provided appropriate details concerning data protection and storage? Have security issues been properly considered?

X Yes ☐ No Comments:

8. Dissemination

a) Has the applicant provided appropriate details concerning research dissemination?

x Yes ☐ No Comments:

Are there appropriate details regarding how privacy and confidentiality will be maintained during dissemination?

x Yes ☐ No Comments:

Are there appropriate details regarding any specific considerations about sharing the research?

☐ Yes ☐ No Comments:

General comments: An interesting study, with no major ethical concerns. There are a few issues that the committee may want to discuss:

1) It is stated to participants that 'if they experience any distress due to childhood memories, then completion of the study will not help in any way to access the help needed'. Possibly also include that they should not participate if they have had negative experiences.

2) In question 18 Julian is also identified as being able to have access-does this need to be clarified on the information sheets?

3) Not sure if ethical issues, but contingency details and intended analysis are missing.

Review status

☐ Chair's action

☐ Staff/PGR for full review

☐ Work with external agencies

☐ Other issues/concerns

X UG/PGT for full review

☐ Work with vulnerable participants

NAME: Hannah Heath

☐ Supervisor ☐ Supervisor/Reviewer 1 ☒ Reviewer 1 ☐ Reviewer 2
DATE: 07.03.2017



University of
Chester

**DEPARTMENT OF PSYCHOLOGY
ETHICS REVIEW FORM**

A) Applicant and submission details

Name of applicant: Sarah Rafferty

Project title: A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

Applicant status: ☐ UG ☒ XPGT ☐ PGR ☐ Staff

If you are the applicant's supervisor, have you discussed ethical issues with the applicant?

☐ Yes, the applicant is an UG/PGT student and I wish to send the application for accelerated student review.

☐ Yes, the applicant is a UG/PGT student and I wish to send the application for full review.

☐ Yes, the applicant is a PGR student and I wish to send the application for full review.

☐ No → Comments:

B) Review of application

1. Has the applicant signed and dated the form?

a) ☒ Yes ☐ No → Return to applicant for signature before continuing with review process.

2. What is the submission type?

a) ☒ First submission to this or any other committee

b) ☐ Resubmission of a rejected application by this committee

• Is there a summary of the requirements of the committee? Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

c) ☐ Revised submission intended to replace an application approved by this committee

• Is the original application attached?: ☐ Yes ☐ No → Return to applicant for full details

d) ☐ First submission to this committee; has been submitted to another committee.

• Is the original application attached? ☐ Yes ☐ No → Return to applicant for full details

3. Research Plan and Methodology

a) Is the study well formulated in terms of drawing on the relevant literature and is it methodologically, analytically and scientifically sound?

☒ Yes ☐ No Comments:

b) Are the timescales provided appropriate?

☒ Yes ☐ No Comments:

c) Are there contingency details?

☐ Yes ☒ No Comments: No longer a requirement? Project seems realistic

d) Is there consideration of how to minimise, manage and monitor issues of distress and harm, however minor?

☒ Yes ☐ No Comments: [Click here to enter text.](#)

e) Are appropriate debrief details provided?
☒ Yes ☐ No Comments:

f) Are appropriate details regarding the use and management of deception provided?
☐ Yes ☐ No ☒ N/A Comments:

4. Sample size, participants and recruitment

a) Has the applicant provided appropriate details of the sample and how it will be identified?
☒ Yes ☐ No Comments:

b) Has the applicant provided appropriate details of where the research will take place, including issues regarding permission and appropriate health and safety information? Is the necessary documentation attached?
☐ Yes ☐ No Comments: There is mention of a paper version of the questionnaire (Q9 & Q18) which has thrown me a bit; there are no details of how Ps would be recruited for this, or where it would be administered

If the applicant is a taught student and they did not attend the mandatory H&S briefing have they provided appropriate evidence that they have full and satisfactory awareness of the relevant health and safety protocol?
☐ Yes ☐ No ☒ N/A Comments:

c) Has the applicant provided appropriate details and attached the necessary documentation concerning their recruitment procedures? In particular, have they appropriately considered how to minimise, manage and monitor issues of distress and harm?
☒ Yes ☒ No Comments: Yes and no... This issue of the paper version again – no details of how Ps would be recruited face to face

Are there appropriate RPS credits? ☒ Yes ☐ No ☐ N/A

d) Has the applicant provided appropriate details and attached the necessary documentation concerning the information made available to participants? In particular, are there appropriate considerations if using internet mediated research?
☒ Yes ☐ No Comments:

Is there appropriate consideration of how to manage issues of distress and harm?
☒ Yes ☐ No Comments:

Are there appropriate details regarding informed consent?

☐ Yes ☒ No Comments: Q13 states that consent will not be written, but Q9 & Q18 state that some Ps may complete paper version of the questionnaire?

Are there appropriate details regarding anonymity and confidentiality?

☒ Yes ☐ No Comments:

Are there appropriate details regarding withdrawal procedures?

☒ Yes ☐ No Comments:

e) Are there appropriate details regarding time commitment from participants?
☒ Yes ☐ No Comments:

f) Are there appropriate details regarding compensation arrangements?
☒ Yes ☐ No Comments:

- g) If using social media for recruitment have details been provided on
- Proposed sites and social groups?
X Yes ☐ No Comments:
 - Social media messages?
X Yes ☐ No Comments: BUT there is direct link to study on ad; potential Ps should be asked to PM the researcher

5. Data Collection and Analysis

- a) Has the applicant provided full procedural details and attached the necessary documentation concerning data collection procedures?
☐ Yes X No Comments: This nebulous suggestion of a paper version has not been addressed in terms of data collection

6. Data Analysis

- a) Has the applicant provided appropriate details concerning data analysis?
☐ Yes X No Comments: does not appear to be required on the form

7. Data protection and Storage

- a) Has the applicant provided appropriate details concerning data protection and storage? Have security issues been properly considered?
X Yes ☐ No Comments:

8. Dissemination

- a) Has the applicant provided appropriate details concerning research dissemination?
X Yes ☐ No Comments:
Are there appropriate details regarding how privacy and confidentiality will be maintained during dissemination?
X Yes ☐ No Comments:
Are there appropriate details regarding any specific considerations about sharing the research?
X Yes ☐ No Comments:

General comments: I have a few minor queries about this. Applicant has not completed check list on p.2. Social media ad has direct link to study. There is this lack of detail about the paper version of the questionnaire; presumably there should also be a consent form, in this case? And how will Ps be recruited for this – RPS and social media script both imply an online study? And the PIS states that data will be stored electronically, but what about paper versions? Section B – not all Qs have 'prefer not to say' option.

Review status

- ☐ Chair's action
☐ Staff/PGR for full review ☐ UG/PGT for full review
☐ Work with external agencies ☐ Work with vulnerable participants

☐ Other issues/concerns

NAME: Clea Wright

☐ Supervisor ☐ Supervisor/Reviewer 1 ☐ Reviewer 1 ☒ Reviewer 2

DATE: 20/03/2017

Ethical Approval Application Amendment Form

University of
ChesterUNIVERSITY OF CHESTER, DEPARTMENT OF PSYCHOLOGY
APPLICATION FOR ETHICAL APPROVAL AMENDMENT FORM

A) Applicant and personnel

Applicant: Sarah Rafferty

Project title: A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults.

Applicant status: ☐ Staff → Go to Section B ☒ PGR ☐ Undergraduate ☐ Postgraduate taught

Supervisor: Dr Julie Kirkham

B) Declaration

1. ☒ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee and I am required to make the following amendments to my application.

List the recommendations of the committee. It should be made clear to all participants that Julian Lloyd is involved; On the application there is mention of a paper version of the questionnaire but there are no details of how participants will be recruited or where will take place, all details refer to the online version; Social media advert had link to study, participants should private message the researcher for the link. Take link out of advert; Using the Survivors trust as a point of reference is assuming a negative reaction. Tell participants not to take part if they have undergone traumatic event recently; On Appendix A change where it says the data will only be seen by the student and their supervisor to the data will only be seen by those involved in the assessment of this work.

Describe how you have addressed these requirements. Julian Lloyd added as Co-applicant on ethics form, his participation outlined in the information sheet (Appendix A) and his contact details added to the information and debrief sheets (Appendices A and E); Questions 7, 9, 12 and 13 of ethics form changed to outline procedure, ethical issues and consensual information regarding the paper version of the questionnaires, appendix added for a face-to-face script for use in the paper version recruitment (Appendix F); Social media advert (Appendix H) amended to take out the link and to ask potential participants to message privately for details; Information and debrief sheets amended to remove the Survivors trust contact details and information sheet changed to advise participants not to take part if they have recently undergone a traumatic event; Appendix A changed to advise that the data will only be seen by the research team and those involved in the assessment of the work.

2. ☐ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee that was approved on [Click here to enter a date.](#)
I wish the committee to consider the following amendments I would like to make to the research plan (attach the original approved application form) [Click here to enter text.](#)

☐ I am a member of staff. Signed: _____ Date: [Click here to enter a date.](#)
Print the amendment form on BLUE PAPER and submit to the Dept. Office


☒ I am an UG/PGT/PGR student. I have discussed any amendments with my project supervisor.
Print the amendment form on BLUE PAPER and submit to the Dept. Office

Signed: Julie Kirkham (Lead Applicant) Date: 11/05/2017

Supervisor comments:
I have discussed the recommendations of the committee with the applicant and I am satisfied they have met the stated requirements./I support the amendments to the research plan. (delete as appropriate)

Doco
SRJK190517

☒ Yes Sign and date the form ☐ No Comments: [Click here to enter text.](#)

Signed:  (Supervisor) Date: 17/5/2017 [Click here to enter a date.](#)

COMMITTEE COMMENTS:

☒ **ACCEPTABLE:** You may now commence with data collection subject to approval from any relevant external agencies.

~~DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS~~

☒ **ACCEPTABLE SUBJECT TO SUBMISSION OF FURTHER AMENDMENT FORM.**

- ☐ Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.
- ☐ Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.

Signed:

Maia G. Lafferty

Date: 19/05/12

Question 3: Co-applicants

Dr. Julie Kirkham
 Programme leader of Family and Child Psychology MSc
 BSc hon. Psychology and Criminology (Staffordshire University)
 M.Res degree in Psychological research methods (University of Manchester)
 PhD in Developmental Psychology (Manchester University)

Dr Julian Lloyd
 BA in Applied Social Studies (Manchester Metropolitan University)
 PhD in Psychology (University of Manchester)

Question 12: Describe the procedures to obtain informed consent

Participants will not give written consent, but will be asked if they are sure that they wish to submit their data before closing the browser, or handing back their envelope, and that they will not be able to withdraw their consent after they have submitted their data.

Question 13: Will consent be written?

~~Yes~~/No (delete as appropriate)

Participants will not give written consent, but will consent to their data being used by submitting their data electronically. Any participants who do not wish for their data to be used can simply close their browser before pressing submit.
 Regarding the paper version, participants will consent to their data being used by handing back the envelope. Any participants who do not wish for their data to be used can simply not hand back the envelope or can hand back a blank copy of the questionnaires.

Question 7: Describe the methods and procedures of the study

Participants will be invited to partake in the study via the University of Chester RPS system and via social media private messages (to ensure all participants are above the age of 18). The study aims to get between 60 and 100 participants in total. Participants will be directed to a website, hosted by Bristol online survey, which will contain an information sheet (see appendix A) outlining the purpose of the study, advise on sources available if they experience any distress, contact information for researchers, that the questionnaires used are not clinical or diagnostic measures and that shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives. If participants consent to continue, they will be taken on to complete questionnaires for each measure. For the independent variables of the partaking in fantasy play and having an imaginary companion, the Demographics, Imaginary Companion and Fantasy Play Scale will be used (see appendix B). This will determine whether participants had an imaginary friend, and if so, whether this was an imagined entity or a personified object, the age that they were when this took place and the duration that they had their imaginary companion. It will also determine whether participants partook in fantasy play, and to what extent.

For the dependant variable of shyness, the Revised Cheek and Buss Shyness Scale (Cheek, 1983) will be used (see appendix C). This will ask questions related to shyness and ask participants to rate their answer on a scale of 1-5 to determine the level of shyness of each participant. Finally, the dependant variable of rejection sensitivity will be measured using the Adult Rejection Sensitivity Questionnaire (ARSQ) (Downey, Berenson & Kang, 2006) (see appendix D). This will, again be a scale measure, giving participants scenarios and asking them to rate their levels on anxiety on a scale of 1-6.

Once all the questionnaires have been completed, participants will be asked if they are sure that they wish to submit their data, and will be informed that once submitted, their data cannot be withdrawn from the study.

Once the participant has submitted their data, they will see a debrief sheet (see appendix E) thanking them for their participation, outlining the purposes of the study and directing them to the sources of help for anyone who may be feeling any distress due to their participation in the study.

A paper version of the study may also be used if the desired number of participants isn't reached. This would involve the same materials used in the online version. Participants would be recruited on the University of Chester Campus, and would be approached by the primary applicant, who would use a face-to-face script (see appendix F) to ask for their participation in the study. The participant would be handed an envelope containing Dr Julie Kirkham's name and all materials for the study. The participant can choose to either participate in the study at the time and hand the envelope back to the primary applicant or to participate in the study and hand the envelope in to Critchley building.

Question 9: What ethical issues does this study raise and what measures have been taken to address them?

All participants will be given to chance to read an information sheet (see appendix A) before beginning the questionnaire which will outline the purpose of the study and informs participants that their data will remain anonymous, will only be accessible by the lead researchers and the MSc student and will be stored on a secure, password protected computer.

Participants will also be advised that the questionnaires used in the study are not clinical or diagnostic measures and that shyness and rejection sensitivity are normal behaviours experienced by individuals at some point in their lives. They are informed that if they experience any distress due to childhood memories, then completion of the study will not help in any way to access the help needed. However, there are support sources listed in the information sheet for participants to refer to should they feel the need to. Furthermore, each question will have a 'prefer not to say' option for those participants who don't feel comfortable answering a certain question.

Participants will also be informed that they can withdraw from the study at any point, but that this is only before submitting their data by closing the questionnaire browser (or by handing back their envelope if participating in the paper version). If a participant wishes to withdraw after starting the questionnaire, they can simply close their browser and not submit their data. It will be outlined that once the data is submitted it cannot be withdrawn, due to the anonymity of data meaning that each participants' data will be unidentifiable. Participants will not give written consent, but will consent by submitting their questionnaire. Once completed, participants will receive a full debrief letter (see appendix E), again, outlining the purpose of the study, that their data will be kept anonymous and that if they are experiencing any distress to look into the sources of support listed.

For those participants who are given a paper copy of the questionnaire, this will be given to them in an envelope and handed back to either the researcher or handed in to Critchley building in the same envelope, giving the participant the chance to either hand back a blank copy of the questionnaire, or not hand back the envelope at all if they do not wish to participate. Any paper copies of questionnaires will not contain any participant information, and therefore will protect participants' anonymity. All paper versions will be kept securely in a locked filing cabinet on the University of Chester campus and will only be accessible by the primary applicant and the supervisor.

Appendix A

Information Sheet

Participant Information Sheet

University of
Chester
A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults

You are being invited to take part in a research study within the Department of Psychology at Chester University. Before you decide to take part, it is important for you to understand why the research is being carried out and what it will involve. Please take the time to read the following information carefully. Take your time to decide whether or not you wish to take part. Thank you for reading this.

Background

Fantasy play is an enjoyable part of childhood which exists throughout most cultures in the world. As part of fantasy play children may create imaginary friends (ICs) in the form of completely imagined entities or personified toys (e.g., giving a favourite doll a personality.) (Klausen & Passman, 2007). Psychological research has suggested that fantasy play and ICs may be associated with differences in social characteristics, behaviours and abilities (Carlson & Taylor, 2005; Crozier, 2000; Roby & Kidd, 2008). The present study aims to investigate whether engaging in fantasy play and having an IC in childhood is associated with characteristics in adulthood such as shyness – the feeling of apprehension or anxiety when with other people, and rejection sensitivity - anxiously expecting and overreactions to social rejection.

What does the study involve?

The study will take no longer than 30 minutes to complete and involves answering a number of questions surrounding the topic area. Questions will be based around the topics of Imaginary Companions (ICs), fantasy play, Shyness and Rejection Sensitivity. If you feel that any of these topics are potentially sensitive to you, then please consider not taking part.

Will my data be confidential?

All data recorded will remain anonymous and can only be seen by those on the research team and those who are involved in the assessment of this work. Data will be stored on a secure password protected computer / locked filing cabinet. Your data will not be passed on or individually published- only the group data will be discussed. Partially collected data may be used if sufficient for analytic purposes.

Benefits and Risks of the Research

If you choose to participate in this research you will contribute to academic research in the field of Imaginary Companions (ICs). If you have an RPS participant code, you will receive 2 credits for completing this study. The questionnaires used in this study are not clinical or diagnostic measures and shyness and rejection sensitivity are normal behaviours experienced

by individuals at some point in their lives. There is a small risk that you may be distressed by some questions within the scale relating to childhood. If you are experiencing distress because of painful childhood experiences then completion of this study will not in any way help to access the help needed, however useful sources of support are provided (see bottom of page). Please don't take part in this study if you have recently undergone a traumatic event. Within the questionnaires there is a 'prefer not to say' option and you can withdraw at any time before you submit your data by closing down the browser, however once submitted your data cannot be withdrawn as it will be anonymous and thus unidentifiable.

What will happen to the results of the research study?

The results will be written up in an academic publication and may be presented at an academic conference. The data may then be combined with a previous data set and written up by Dr Julian Lloyd and Dr Julie Kirkham. Individuals who participate will not be identified in any subsequent report or publication only group data will be discussed.

All information which is collected about you during the course of the research will be kept strictly confidential. Participants should note that data collected from this project may be retained and published in an anonymised form. By agreeing to participate in this project, you are consenting to the retention and publication of data.

Do not hesitate to use the contact details provided below if you feel you have been affected by the study in any way.

Supervisor: Dr Julie Kirkham - j.kirkham@chester.ac.uk - Telephone: 01244 511 622

Student researcher: Sarah Rafferty - 1622410@chester.ac.uk

Other contact: Dr Julian Lloyd - Julian.lloyd@chester.ac.uk - Telephone: 01244 513 483

Useful Contact Details

Student Support and Guidance (University of Chester): student.welfare@chester.ac.uk

Telephone: 01244 511 550

Samaritans: Telephone: 116 123 Email: jo@samaritans.org

Debrief Sheet

Appendix E



Debrief

Thank You for being a participant in the current study 'A Retrospective Study: The relationship between childhood fantasy play and rejection sensitivity and shyness in adults'. The aim of this study is to *understand how imaginary companions and fantasy play during childhood relate to rejection sensitivity and shyness during adulthood*. If any of the topics in the questionnaire have affected you in any way there are useful contact details below. If you are experiencing distress because of painful childhood experiences, then completion of this study will not in any way help to access the help needed however useful sources of support are provided (see bottom of page). The responses to the survey will be kept anonymous and will be kept under password protection. Thank you for your participation in this study.

Contact Details

Supervisor: Dr Julie Kirkham - j.kirkham@chester.ac.uk - Telephone: 01244 511 662

Student researcher: Sarah Rafferty - 1622410@chester.ac.uk

Other contact: Dr Julian Lloyd - Julian.lloyd@chester.ac.uk - Telephone: 01244 513 483

Useful Contact Details

Student Support and Guidance (University of Chester): student.welfare@chester.ac.uk

Telephone: 01244 511 550

Samaritans: Telephone: 116 123 Email: jo@samaritans.org

Appendix F

Face-to-face script

'Hello, my name is Sarah Rafferty and I am currently completing a Master's degree in Child and Family Psychology at this University. As part of this, I am doing some psychological research which examines the relationship between childhood fantasy play and rejection sensitivity and shyness in adults. I am looking for participants, if you would be interested in taking part.

This envelope contains everything you'll need to take part, there is an information sheet, a few questionnaires and a debrief sheet. I'd be happy to wait while you complete them, or you can do this in your own time and return the envelope to the Critchley building when you're done.

Once you're done, put everything back inside the envelope and seal it. There's no personal details recorded so everything will be anonymous, and you don't have to complete the questionnaires or hand back the envelope, even if you've already started, if you decide that you don't want to take part.

Once you hand back your envelope, because you'll then be anonymous to me, you won't be able to withdraw your data.'

Appendix H

Social Media Advertisement

'Hello, my name is Sarah Rafferty and I am currently undertaking some psychological research at the University of Chester which examines the relationship between childhood fantasy play and rejection sensitivity and shyness in adults. If you are interested in taking part in this research, please send me a private message for more information.'

Appendix F

Imaginary Companion Play During Childhood Questionnaire

Section A: Demographic Questions

What is your age in years? Prefer not to answer ☐

With what sex do you identify? (please select) Male ☐ Female ☐ Prefer not to Say ☐

What is your ethnicity (please select)

White ☐ Black Caribbean ☐ Black African ☐ Black Other ☐

Indian ☐ Pakistani ☐ Bangladeshi ☐ Chinese ☐

Mixed race (please also select those that apply) Other ☐

Prefer not to answer ☐

What is your highest degree completed? (please select)

GCSEs (or equivalent) ☐ A levels (or equivalent) ☐ Foundation degree ☐

Vocational degree Level ☐ (please indicate)

Bachelor's degree ☐ PG Certificate ☐ PG Diploma ☐

Master's ☐ Doctorate ☐ Other

Prefer not to answer ☐

If you are currently a student, what is your level of study? (Please select)

Level 4/ 1st year undergraduate ☐

Level 5/ 2nd year undergraduate ☐

Level 6/ 3rd year undergraduate ☐

PG Certificate ☐ PG Diploma ☐

Master's ☐ Doctorate ☐

Prefer not to answer ☐

Do you have any siblings? (tick appropriate box) Yes ☐ No ☐ Prefer not to say ☐

If yes, birth order

Section B: Imaginary Companion Play during Childhood

The following questions are about Imaginary companions in childhood. An imaginary companion can be described as a completely imagined construct which no one else can see, or as a

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

physical object such as a doll or a teddy bear which has been given personality characteristics and treated as if it were a real person (Klausen & Passman, 2007).

1. At any point during your childhood did you have an imaginary companion with whom you interacted and played with?

Yes ☐

No ☐

Prefer not to say ☐

If yes go to next question, if no or prefer not to say go to section C

2. What type of imaginary companion did you have?

A personified object (such as a doll or toy) which you treated as if it were a real person ☐

An entirely imagined companion ☐

3. What sex was your imaginary companion?

Male ☐ Female ☐ Neither ☐

4. Approximately what age were you when you had an imaginary companion?

0-1 Year ☐ 2-3 years ☐ 4-5 years ☐ 6-7 years ☐ 7+ years ☐

5. What was the approximate duration of time which you had an imaginary companion?

Less than one year ☐

1-2 years ☐

3-4 years ☐

Over 5 years ☐

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

6. In the space below, please provide as much detail as you can about the imaginary companion you had during childhood, including anything you may remember about appearance or any other features



7. Please rate how vivid your imaginary companion was on a scale of 1-5, 1 indicating low vividness and 5 indicating high vividness (please circle)

Low vividness

highly vivid

1

2

3

4

5

Appendix G

Predisposition Towards Fantasy Play Scale

Fantasy Play during Childhood

The following questions are about Fantasy play in childhood. Fantasy play involves pretending to be someone or something else and may involve transforming objects in the room to fit with the theme of the current play (Garvey, 1990). When answering the questions please think back to your childhood and answer as accurately as possible. Please tick the appropriate box to indicate your response to each statement.

1. I often engaged in fantasy play

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I often treated my toys as if they were real

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I preferred constructive play such as board games/lego rather than fantasy play

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I had a lot of toys as a child which involved some element of pretence

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. I often gave my toys their own names and personalities

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

6. I did not enjoy fantasy play as a child

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. My favourite kind of play involved using my imagination

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. I found fantasy play boring as a child

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. I enjoyed taking on the role of other people or creatures in my childhood play

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. I did not enjoy pretending that my toys were alive

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Fantasy play was an important part of my childhood

Prefer not to say	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix H

Revised Cheek and Buss Shyness Scale

Please read each item carefully and decide to what extent it is characteristic of your feelings and behaviour and mark which option fits best with you.

1. I feel tense when I'm with people I don't know well.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. I am socially somewhat awkward.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. I do not find it difficult to ask other people for information.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. I am often uncomfortable at parties and other social functions.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. When in a group of people, I have trouble thinking of the right things to talk about.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. It does not take me long to overcome my shyness in new situations.

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. It is hard for me to act natural when I am meeting new people.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. I feel nervous when speaking to someone in authority.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. I have no doubts about my social competence.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. I have trouble looking someone right in the eye.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. I feel inhibited in social situations.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. I do not find it hard to talk to strangers.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. I am more shy with members of the opposite sex.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. During conversations with new acquaintances, I worry about saying something dumb.

Very uncharacteristic	Uncharacteristic	Neutral	Characteristic	Very characteristic	Prefer not to say
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix I

Adult Rejection Sensitivity Questionnaire

The items below describe situations in which people sometimes ask things of others. For each item, imagine that you are in the situation, and then answer the questions that follow it on a scale of 1-6.

1. You ask your parents or another family member for a loan to help you through a difficult financial time.

How concerned or anxious would you be over whether or not your family would want to help you?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that they would agree to help me as much as they can.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

2. You approach a close friend to talk after doing or saying something that seriously upset him/her.

How concerned or anxious would you be over whether or not your friend would want to talk with you?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that he/she would want to talk with me to try to work things out.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

3. You bring up the issue of sexual protection with your significant other and tell him/her how important you think it is.

How concerned or anxious would you be over his/her reaction?

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Very unconcerned 1 2 3 4 5 6 Very concerned Prefer not to say
☐

I would expect that he/she would be willing to discuss our possible options without getting defensive.

Very unlikely 1 2 3 4 5 6 Very likely Prefer not to say
☐

4. You ask your supervisor for help with a problem you have been having at work.

How concerned or anxious would you be over whether or not the person would want to help you?

Very unconcerned 1 2 3 4 5 6 Very concerned Prefer not to say
☐

I would expect that he/she would want to try to help me out.

Very unlikely 1 2 3 4 5 6 Very likely Prefer not to say
☐

5. After a bitter argument, you call or approach your significant other because you want to make up.

How concerned or anxious would you be over whether or not your significant other would want to make up with you?

Very unconcerned 1 2 3 4 5 6 Very concerned Prefer not to say
☐

I would expect that he/she would be at least as eager to make up as I would be.

Very unlikely 1 2 3 4 5 6 Very likely Prefer not to say
☐

6. You ask your parents or other family members to come to an occasion important to you.

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

How concerned or anxious would you be over whether or not they would want to come?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that they would want to come.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

7. At a party, you notice someone on the other side of the room that you'd like to get to know, and you approach him or her to try to start a conversation.

How concerned or anxious would you be over whether or not the person would want to talk with you?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that he/she would want to talk with me.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

8. Lately you've been noticing some distance between yourself and your significant other, and you ask him/her if there is something wrong.

How concerned or anxious would you be over whether or not he/she still loves you and wants to be with you?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that he/she will show sincere love and commitment to our relationship no matter what else may be going on.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

9. You call a friend when there is something on your mind that you feel you really need to talk about.

How concerned or anxious would you be over whether or not your friend would want to listen?

Very unconcerned						Very concerned	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

I would expect that he/she would listen and support me.

Very unlikely						Very likely	Prefer not to say
1	2	3	4	5	6		<input type="radio"/>

Appendix J

SPSS Output

Demographics

What is your ethnicity (please select) - White

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid White	60	93.8	93.8	93.8
Indian	1	1.6	1.6	95.3
Mixed Race	1	1.6	1.6	96.9
Other	2	3.1	3.1	100.0
Total	64	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
What is your age in years?	64	18	62	27.27	9.782
Valid N (listwise)	64				

Predisposition Towards Fantasy Play Scale – Cronbach's Alpha, Scree Plot, Eigenvalues and Factor Loadings

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.854	11

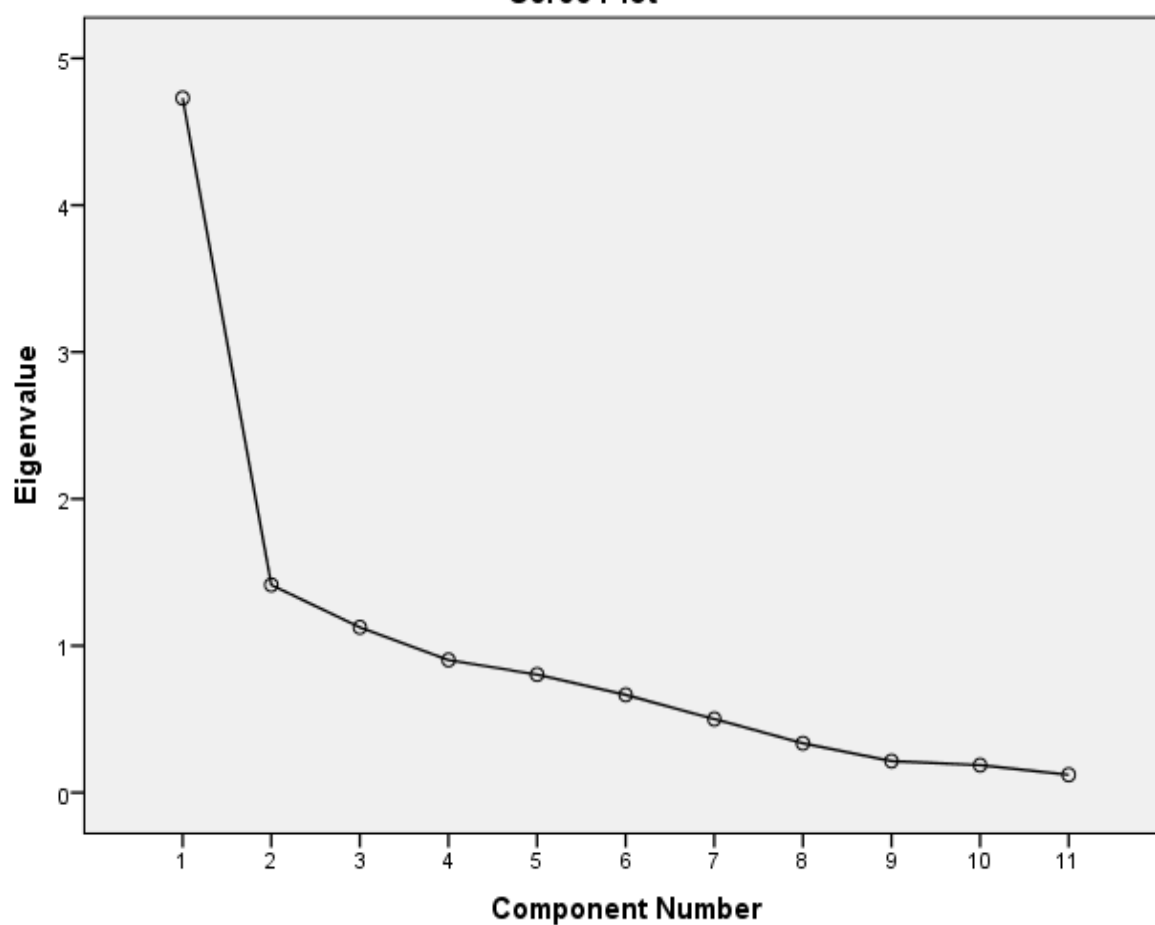
IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.729	42.992	42.992	4.729	42.992	42.992
2	1.414	12.858	55.849	1.414	12.858	55.849
3	1.125	10.230	66.079	1.125	10.230	66.079
4	.903	8.207	74.286			
5	.804	7.306	81.592			
6	.666	6.051	87.643			
7	.501	4.551	92.194			
8	.336	3.055	95.248			
9	.215	1.953	97.201			
10	.187	1.697	98.898			
11	.121	1.102	100.000			

Extraction Method: Principal Component Analysis.

Scree Plot



IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Component Matrix^a

	Component		
	1	2	3
I often engaged in fantasy play	.711	.068	.305
I often treated my toys as if they were real	.637	.493	-.314
I preferred constructive play such as board games/lego rather than fantasy play	.324	-.521	.183
I had a lot of toys as a child which involved some element of pretence	.494	.364	.482
I often gave my toys their own names and personalities	.530	.640	-.046
I did not enjoy fantasy play as a child	.801	-.293	-.313
My favourite kind of play involved using my imagination	.697	-.214	.382
I found fantasy play boring as a child	.857	-.297	-.101
I enjoyed taking on the role of other people or creatures in my childhood play	.405	.312	-.006
I did not enjoy pretending that my toys were alive	.669	-.125	-.602
Fantasy play was an important part of my childhood	.845	-.138	.221

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Revised Cheek and Buss Shyness Scale – Cronbach's Alpha, Scree Plot, Eigenvalues and Factor Loadings

Reliability Statistics

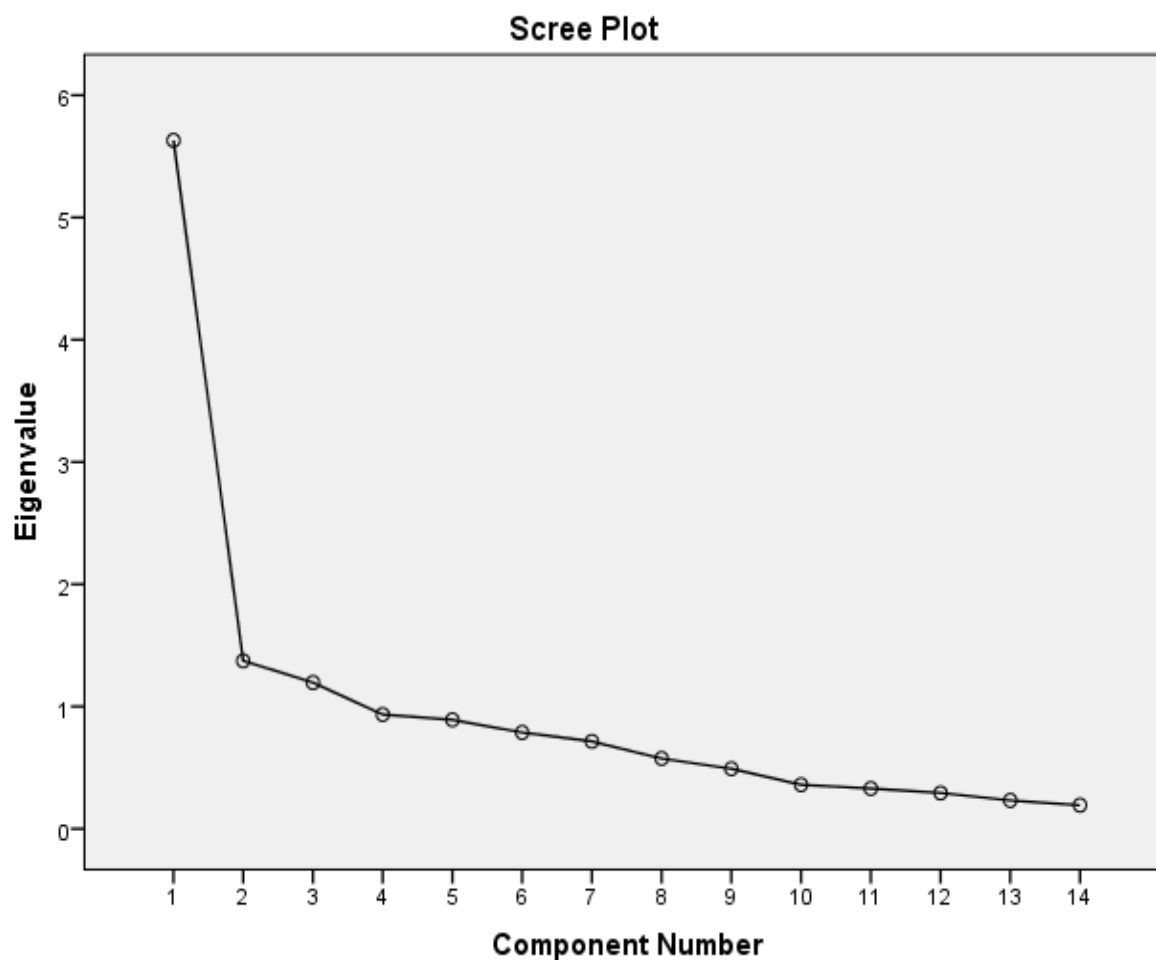
	Cronbach's Alpha	
	Based on Standardized Items	N of Items
Cronbach's Alpha		
.877	.878	14

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.631	40.218	40.218	5.631	40.218	40.218
2	1.373	9.810	50.028	1.373	9.810	50.028
3	1.196	8.542	58.570	1.196	8.542	58.570
4	.934	6.674	65.244			
5	.891	6.364	71.608			
6	.788	5.626	77.234			
7	.714	5.103	82.337			
8	.575	4.106	86.443			
9	.491	3.506	89.949			
10	.360	2.572	92.521			
11	.329	2.351	94.872			
12	.293	2.092	96.964			
13	.232	1.657	98.621			
14	.193	1.379	100.000			

Extraction Method: Principal Component Analysis.

**Component Matrix^a**

	Component		
	1	2	3
I feel tense when I'm with people I don't know well	.802	-.121	-.080
I am socially somewhat awkward	.734	.079	-.156
I do not find it difficult to ask other people for information	.687	-.084	-.083
I am often uncomfortable at parties and other social functions	.552	-.605	.288
When in a group of people, I have trouble thinking of the right things to talk about	.716	-.461	.137
It does not take me long to overcome my shyness in new situations	.496	.036	-.719
It is hard for me to act natural when I am meeting new people	.668	.338	.058
I feel nervous when speaking to someone in authority	.374	.520	.446
I have no doubts about my social competence	.557	.099	-.486
I have trouble looking someone right in the eye	.524	.304	.029
I feel inhibited in social situations	.682	-.201	.199
I do not find it hard to talk to strangers	.824	-.083	.083
I am more shy with members of the opposite sex	.416	.435	.122
During conversations with new acquaintances, I worry about saying something dumb	.652	.205	.199

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

**Adult Rejection Sensitivity Questionnaire – Cronbach's Alpha, Scree Plot,
Eigenvalues and Factor Loadings**

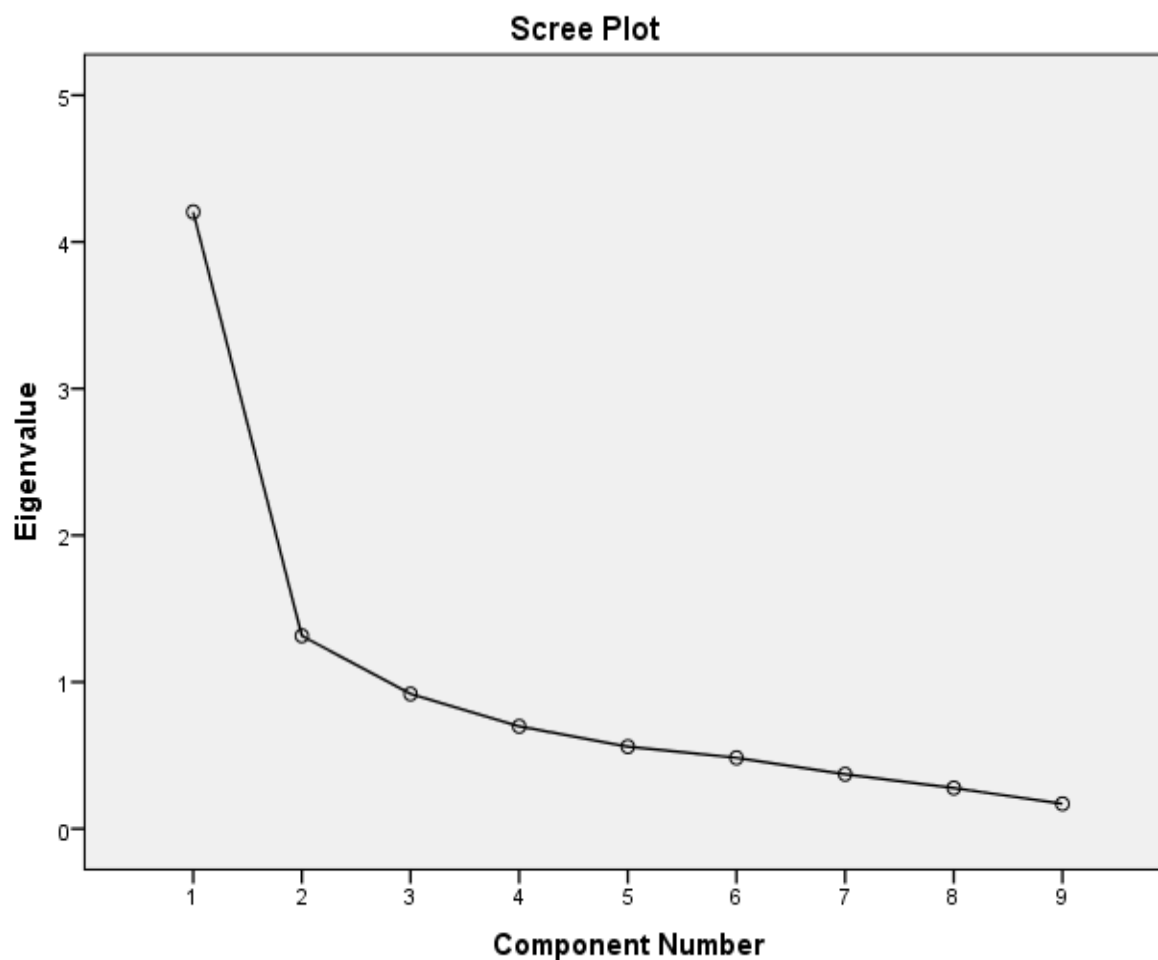
Reliability Statistics

	Cronbach's Alpha Based on Cronbach's Alpha	Standardize d Items N of Items
	.844	.849 9

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.205	46.717	46.717	4.205	46.717	46.717
2	1.315	14.610	61.327	1.315	14.610	61.327
3	.919	10.213	71.540			
4	.698	7.756	79.297			
5	.560	6.222	85.519			
6	.484	5.374	90.893			
7	.372	4.131	95.024			
8	.278	3.087	98.111			
9	.170	1.889	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix^a

	Component	
	1	2
TOTALR1	.428	.724
TOTALR2	.626	-.538
TOTALR3	.504	-.330
TOTALR4	.751	.014
TOTALR5	.812	-.173
RSTOTAL6	.576	.457
RSTOTAL7	.752	-.042
TOTALRS8	.787	-.214
TOTALRS9	.797	.326

Extraction Method: Principal

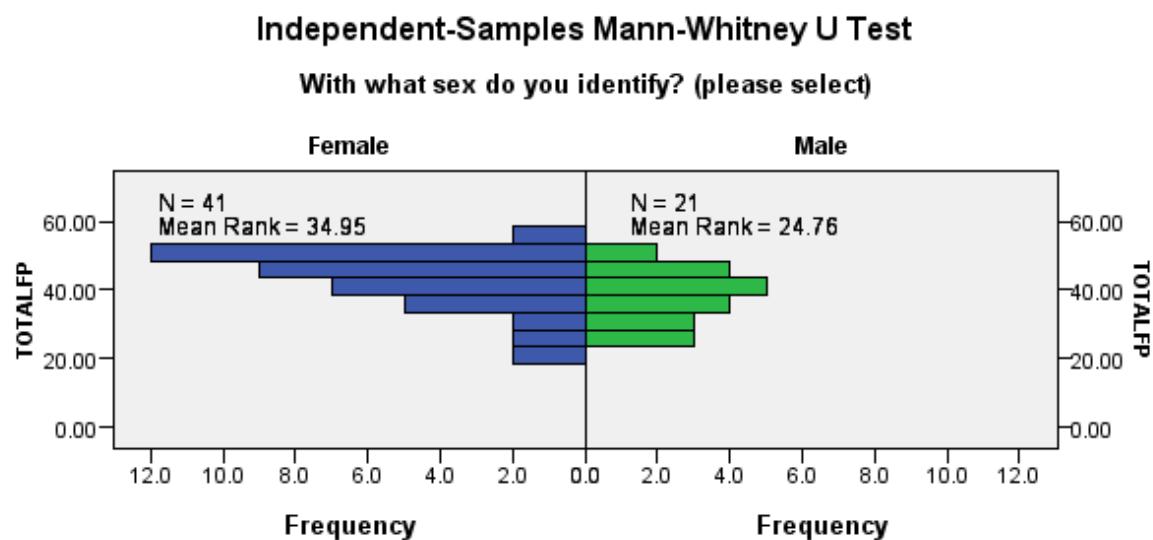
Component Analysis.

a. 2 components extracted.

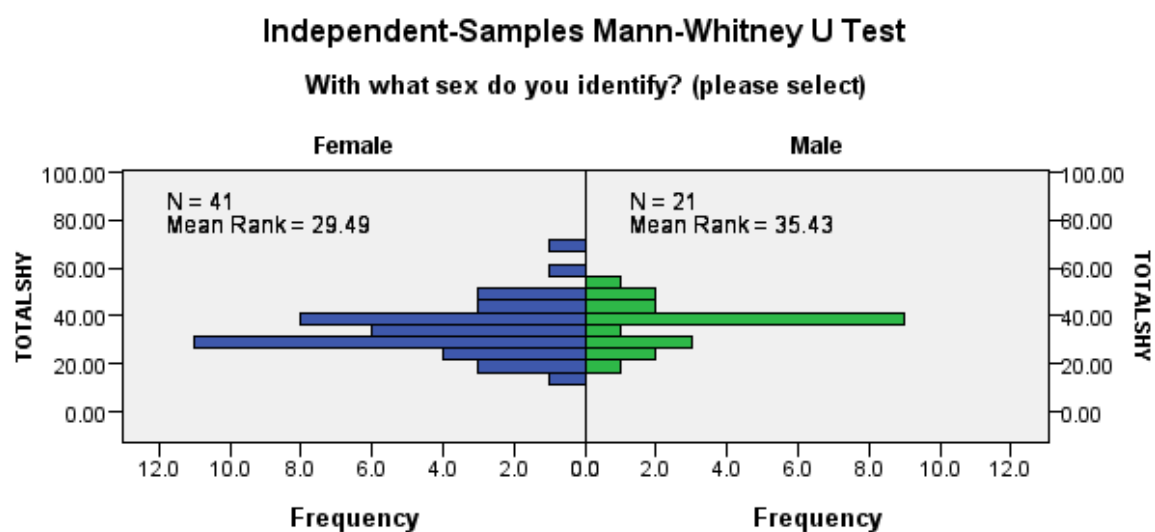
Gender Differences – Descriptive Statistics

With what sex do you identify? (please select)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	41	64.1	64.1	64.1
	Male	21	32.8	32.8	96.9
	Prefer not to say	2	3.1	3.1	100.0
	Total	64	100.0	100.0	

Mann Whitney U Test – Gender Differences in Fantasy Play Predisposition

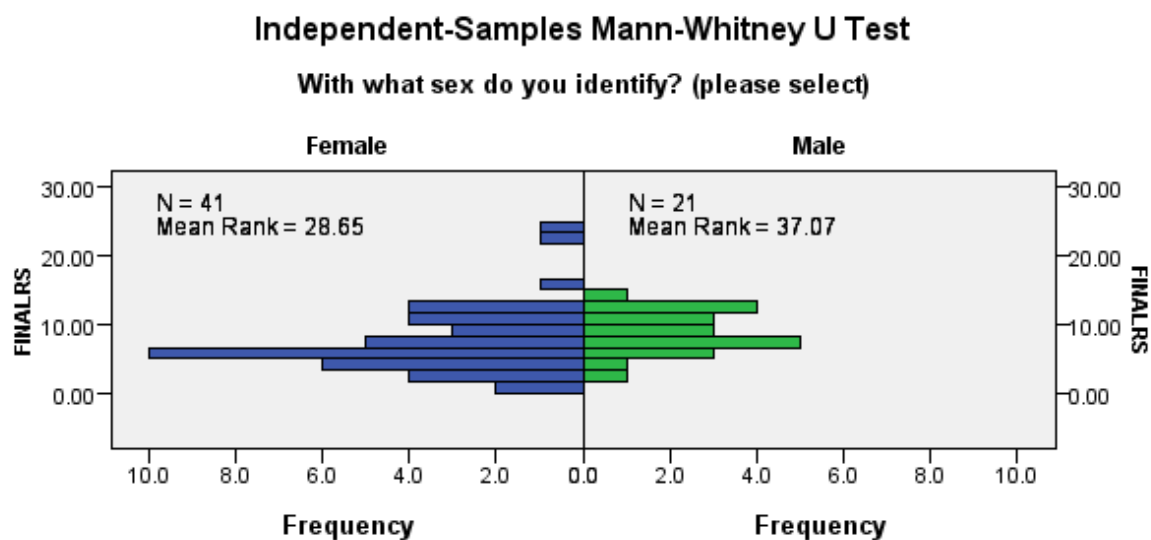


Total N	62
Mann-Whitney U	289.000
Wilcoxon W	520.000
Test Statistic	289.000
Standard Error	67.102
Standardized Test Statistic	-2.109
Asymptotic Sig. (2-sided test)	.035

Mann Whitney U Test – Gender Differences in Shyness

Total N	62
Mann-Whitney U	513.000
Wilcoxon W	744.000
Test Statistic	513.000
Standard Error	67.133
Standardized Test Statistic	1.229
Asymptotic Sig. (2-sided test)	.219

Mann Whitney U Test – Gender Differences in Rejection Sensitivity



Total N	62
Mann-Whitney U	547.500
Wilcoxon W	778.500
Test Statistic	547.500
Standard Error	67.223
Standardized Test Statistic	1.740
Asymptotic Sig. (2-sided test)	.082

Imaginary Companion Existence and Type

At any point during your childhood did you have an imaginary companion with whom you interacted and played with?

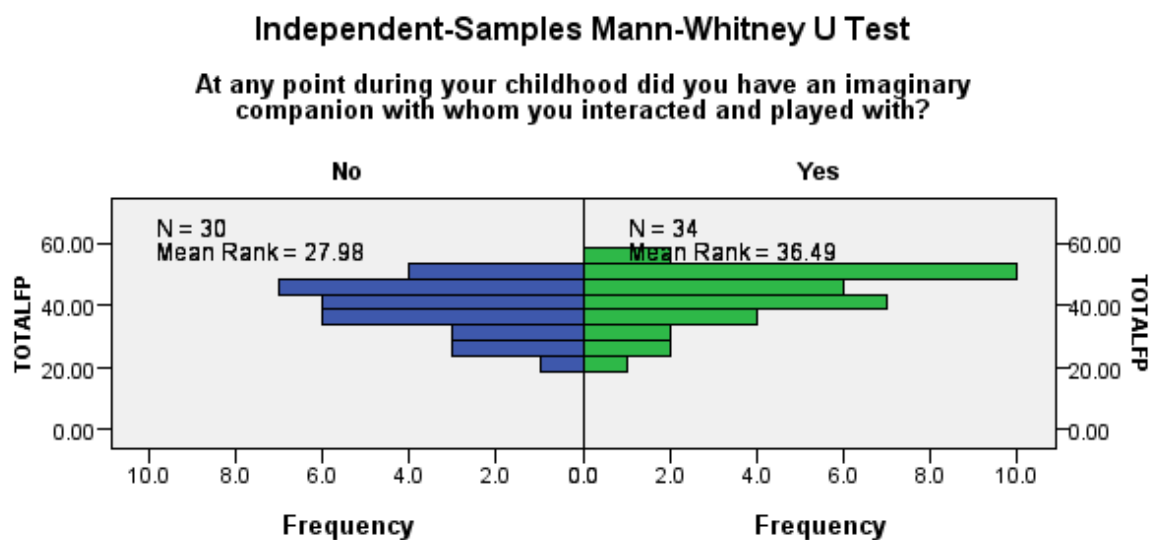
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	53.1	53.1	53.1
	No	30	46.9	46.9	100.0
	Total	64	100.0	100.0	

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

What type of imaginary companion did you have?

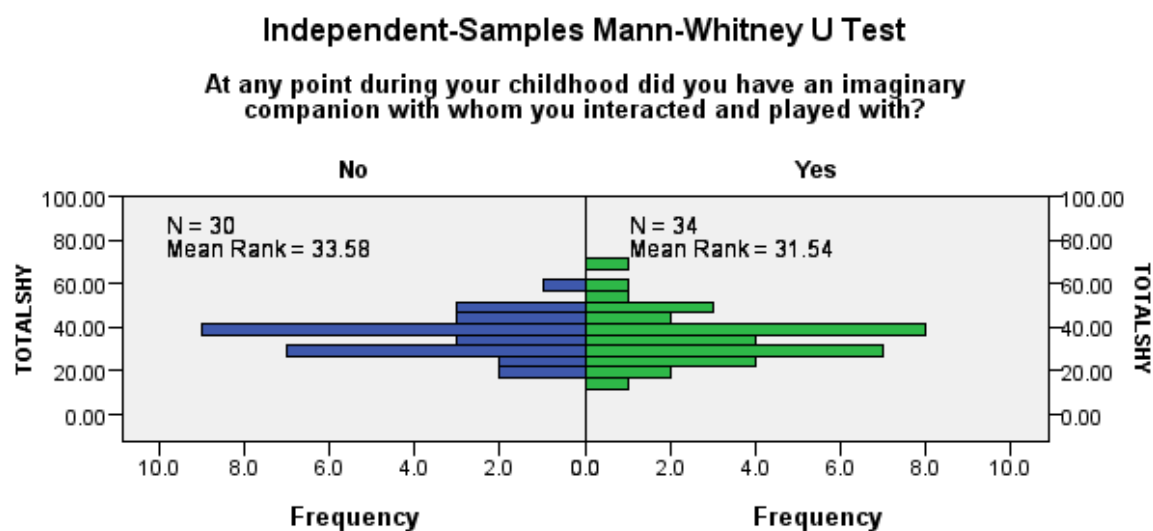
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A personified object (such as a doll or toy) which you treated as if it were a real person	22	34.4	61.1	61.1
	An entirely imagined companion	14	21.9	38.9	100.0
	Total	36	56.3	100.0	
Missing	-999	28	43.8		
Total		64	100.0		

Mann Whitney U Test – Effect of Having a Childhood Imaginary Companion on Predisposition to Fantasy Play



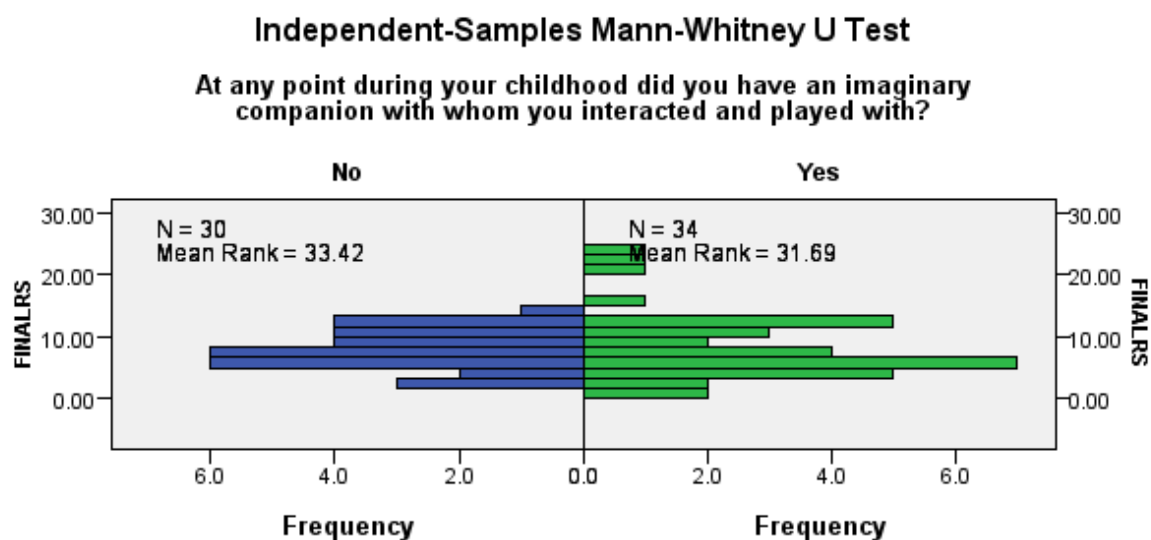
Total N	64
Mann-Whitney U	374.500
Wilcoxon W	839.500
Test Statistic	374.500
Standard Error	74.194
Standardized Test Statistic	-1.826
Asymptotic Sig. (2-sided test)	.068

Mann Whitney U Test – Effect of Having a Childhood Imaginary Companion on Shyness



Total N	64
Mann-Whitney U	542.500
Wilcoxon W	1,007.500
Test Statistic	542.500
Standard Error	74.229
Standardized Test Statistic	.438
Asymptotic Sig. (2-sided test)	.662

Mann Whitney U Test – Effect of Having a Childhood Imaginary Companion on Rejection Sensitivity



Total N	64
Mann-Whitney U	537.500
Wilcoxon W	1,002.500
Test Statistic	537.500
Standard Error	74.320
Standardized Test Statistic	.370
Asymptotic Sig. (2-sided test)	.711

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Descriptive Statistic Regarding Scores on the Predisposition to Fantasy Play, Shyness and Rejection Sensitivity Scales

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TOTALFP	64	21.00	55.00	41.1563	8.46884
TOTALSHY	64	14.00	69.00	36.0625	10.66202
FINALRS	64	1.33	23.67	8.4410	4.54976
Valid N (listwise)	64				

Spearman's Rank Correlations

Correlations

			TOTALSHY	FINALRS	TOTALFP
Spearman's rho	TOTALSHY	Correlation Coefficient	1.000	.604**	-.268*
		Sig. (1-tailed)	.	.000	.016
		N	64	64	64
	FINALRS	Correlation Coefficient	.604**	1.000	-.282*
		Sig. (1-tailed)	.000	.	.012
		N	64	64	64
	TOTALFP	Correlation Coefficient	-.268*	-.282*	1.000
		Sig. (1-tailed)	.016	.012	.
		N	64	64	64

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

Correlations			TOTALSHY	FINALRS
Spearman's rho	TOTALSHY	Correlation	1.000	.604**
		Coefficient		
		Sig. (2-tailed)	.	.000
		N	64	64
	FINALRS	Correlation	.604**	1.000
		Coefficient		
		Sig. (2-tailed)	.000	.
		N	64	64

** . Correlation is significant at the 0.01 level (2-tailed).

Multiple Regression Analysis with Predisposition to Fantasy Play and Shyness Used as a Predictor for Rejection Sensitivity

Coefficients ^a										
	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	2.036	2.383		.854	.397					
TOTALFP	-.066	.043	-.149	1.556	.125	-.307	-.202	-.145	.943	1.061
TOTALSHY	.237	.034	.661	6.893	.000	.696	.674	.642	.943	1.061

a. Dependent Variable: FINALRS

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.711 ^a	.506	.489	2.72531	.506	29.201	2	57	.000	2.045

a. Predictors: (Constant), TOTALSHY, TOTALFP

b. Dependent Variable: FINALRS

IMAGINARY COMPANIONS, FANTASY PLAY, SHYNESS AND REJECTION SENSITIVITY

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	433.763	2	216.881	29.201	.000 ^b
	Residual	423.357	57	7.427		
	Total	857.120	59			

a. Dependent Variable: FINALRS

b. Predictors: (Constant), TOTALSHY, TOTALFP

Multiple Regression Analysis with Predisposition to Fantasy Play and Rejection

Sensitivity Used as a Predictor for Shyness

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	29.796	5.042		5.909	.000					
TOTALFP	-.167	.107	-.145	1.562	.124	-.260	-.201	-.143	.971	1.029
FINALRS	1.448	.199	.677	7.270	.000	.701	.691	.667	.971	1.029

a. Dependent Variable: TOTALSHY

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.716 ^a	.512	.495	7.02630	.512	30.436	2	58	.000	2.148

a. Predictors: (Constant), FINALRS, TOTALFP

b. Dependent Variable: TOTALSHY

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3005.191	2	1502.595	30.436	.000 ^b
	Residual	2863.400	58	49.369		
	Total	5868.590	60			

a. Dependent Variable: TOTALSHY

b. Predictors: (Constant), FINALRS, TOTALFP